Croonian Lectures
ON
ADDISON'S DISEASE.

Delivered before the Royal College of Physicians,

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LECTURE I.—PART II.

BEFORE quitting the description of the constitutional symptoms and discolouration of skin, I must advert to one remarkable feature common to them both, to which I directed attention in my clinical lectures on the subject in 1866. It has been noted also by several other observers in their reports of typical cases, but owing, no doubt, to the shortness of the time that the majority of the patients have remained under treatment, it has never hitherto been classed in its true place as one of the characteristic features of the disease—I mean its paroxysmal mode of progress.

The asthenia, the constitutional symptoms generally, and the change of colour in the skin are all, it is true, progressive, but not steadily so. The course of the disease, on the whole, is slow and chronic; but it is subject to alternate exacerbations and remissions, usually in some degree dependent upon favourable and unfavourable circumstances, but sometimes also apparently quite independent of them. During the remissions, strength is in a great degree recovered, appetite improved, sickness abated; the discolouration becomes paler, and, above all, the patient's whole aspect bespeaks that a heavy weight has been lifted from his head. After each fresh exacerbation, however, the patient remains upon a somewhat lower level than during the previous remission. The recovery of strength and the abatement of other symptoms is less marked, and the skin, though paler than during the last exacerbation, is yet visibly darker than before it. Similar alternations may occur several times before the onset of the fatal paroxysm, but on each occasion the patient takes at least one downward step that he never regains. In two of my own patients these alternations were well marked, though they died in less than one and two years respectively after they came under my care; but, in two others which were under my care for five and eight years respectively, the remissions in the symptoms and the paling of the discolouration were most striking. Both of these, I regret to say, have for the present drifted out of sight, but several similar cases have been recorded by other physicians after their termination. Dr. Van Corput relates, in the case of a woman aged thirty, who died under his care in St. John's Hospital, Brussels, that during four years she had had three considerable periods of remission, and that the colour markedly alternated with the symptoms. Severine records of a woman aged thirty-eight, that, during the months she was in hospital at Bologna before her death, there were several alternations of illness and improvement, and that "the discolouration regularly alternated darker and lighter according to her state of health." Löwe and Wölff have noted similar alternations of symptoms and colour in two very characteristic cases. Dr. Ringer also states in his report of a case, which he sent to me for exhibition at the Pathological Society in 1873, that "with each slight improvement the discolouration of skin grew decidedly less, but on each relapse it became darker than before."

Although a slow chronic progress, with alternate exacerbations and remissions, is, as I have said, the usual course of the disease, it is by no means the only one. Many cases, particularly in younger subjects, run what may be termed a latent course; that is to say, the constitutional symptoms make their first appearance suddenly in a fully developed form, and produce fatal consequences in a few days. This occurred in the case, already mentioned, of Dr. Seth Thompson's patient, a man aged twenty, who, although his skin had been getting dusky for six weeks, had exhibited no symptoms of illness until two days before his admission into the Middlesex Hospital, but grew worse so rapidly that he died on the following day. The girl, E. W——, aged thirteen, who died in the Middlesex Hospital, under my own care, in 1865, is another illustration of this occasional latent course of the disease. She had returned home from an absence of six weeks in the country, apparently quite well, though her parents remarked that she looked sunburnt. This slight dinginess of complexion never left her, but she remained well for some months. Her father then regarded her as "drooping" for three or four weeks, but she had no symptoms of illness, and continued to attend school until two days before she was brought to the hospital, when she presented all the constitutional symptoms of the disease in so fully developed a form that I diagnosed the case at first sight, although the discolouration was scarcely observable. She had suddenly become sick and cold, and her mother had given her a cathartic powder, which was followed by intense depression. Notwithstanding all possible care and restoratives, she died in a week. In Dr. Schotte's almost parallel case, the patient, a girl aged fifteen, had been doing heavy work in the country, and, after complaining for only about four weeks of debility, powerlessness of limbs, and tendency to fall asleep, she was admitted into hospital with the symptoms of the disease in an advanced stage, and died the same night. Eisel also relates the case of a young man aged twenty, who, though his skin had been darkening for a year and he had been feeling unwell for three months, continued to work as a bricklayer until two days before his death, when his strength suddenly failed him. Without doubt these differences in the mode of onset and course of the disease are partly due to differences in the mode of progress of the supra-renal lesion, but the suddenly fatal termination in the first paroxysm is, I feel assured, like the accession of the successive paroxysms, partly due also to the action of some depressing external influence. In the case of E. W—— this was apparently the active aperient administered by her mother, and in Dr. Schotte's case it was probably a dose of calomel and jalap given in the hospital.

One other peculiarity in the course of this remarkable disease must not be overlooked—namely, the very variable date of the appearance of the bronzing of the skin, as compared with that of the constitutional symptoms. In a large proportion of the cases, as might be expected in a disease prevailing chiefly among the class of persons who become hospital patients, no note has been made on this point; and, in a great many other cases, it is reported that the appearance of the symptoms and the discolouration of skin were simultaneous, or nearly so. Sometimes the discolouration is mentioned as soon following the characteristic symptoms, and sometimes as slightly preceding it. But, in a certain number of cases, chiefly among the few that have occurred in the middling and higher classes, or have been longer than usual under medical observation, the interval between the appearance of the constitutional symptoms and that of the bronzing of the skin has been more accurately recorded. In a typical case related by Addison and Wilks, the patient, a lady aged eighteen, was ill only four months, but the bronzing of the skin had existed for a year. In a case of Mr. Hutchinson's, the patient, a boy aged eleven, had felt ill only a few weeks, but the bronzing of skin had been noticed for six months. Löwe relates the case of a young woman aged twenty-seven, whose illness lasted four months, but who had remarked the gradual darkening of her skin on face, neck, hands, arms, and trunk, seven months before death, whilst she still felt quite well. In Eisel's case, already mentioned, the darkening of the patient's skin dated from an attack of vertigo, which only kept him from work a single day, and he continued to feel perfectly well for nine months longer. In a few exceptional cases there has been a much longer interval between the first appearance of the bronzing of skin and that of the characteristic symptoms. Dr. Monro, of Dundee, relates the case of a clergyman's wife, in whom the discolouration of skin began, several years before death, on the forehead and gradually spread over the body, although the constitutional symptoms, which were quite characteristic, only made themselves felt for the first time eight or nine months before death. In the case of a poor married woman, reported by Drs. Cornish and Vaat, the discolouration, which ultimately became general and intense, is said to have begun six years before death, whilst the illness with typical symptoms was of about fifteen months'

duration. These were all typical cases of the disease, no lesion being found of the slightest importance except in the supra-renal capsules. Again, in about an equal number of cases of the same class, the development of the constitutional symptoms is recorded as having preceded the appearance of the discolouration of skin by several months, and sometimes by even longer periods of time. In a typical case, related by Mr. J. Moore, the patient, a clerk, had been failing in health for two years with characteristic symptoms of Addison's disease, but the discolouration only became visible during the last six months, and, though characteristic, was never strikingly developed. In a case of Mr. Kent Spender's, the patient, a young woman aged twenty-one, was ill for a year with fully-developed typical symptoms, but the discolouration only began to make its appearance three months before death on her face and hands, where it became intense, but had not spread to the covered parts of the surface in any appreciable degree when the patient died. Dr. Robertson relates the case of a labourer who had suffered from quite characteristic symptoms of Addison's disease for twenty-two months, never having had any previous illness, but in whom the bronzing of skin only began on the face, arms, hands, and chest a year before death. A German factory manager, aged forty, is reported by Dr. Ploss to have had severe pains in the muscles of the back, from over-exertion, more than two years before death, and to have been ill with typical symptoms of Addison's disease for a year; but the discolouration of skin only began on his face and hands about six months before death, and, although it spread somewhat, was still very partial when the patient died. In a typical case recorded by Dr. Tuckwell, the patient, a young woman aged thirty-one, was ill for a year with characteristic symptoms, but the first appearance of the discolouration of skin was only about three months before death, when there was a sunburnt look of face, neck, shoulders, and forearms; which, however, spread and deepened during the short remainder of life into the typical bronzed skin of Addison's disease. In one or two cases the interval seems to have been considerably longer; for Dr. Andrew reports a typical case of Dr. Black's, in which the patient had been ailing for three years with debility and loss of appetite before the discolouration of skin first made its appearance, two years before death. In another case, related by Mr. Workman, in which the disease apparently followed an injury to the loins, the patient suffered for four years from progressive debility, lumbar pains, and occasional sickness; but the face and upper extremities became bronzed only during the last eighteen months of life.

I must now turn to the consideration of the pathological lesion, which Addison's observation of the clinical phenomena he described led him to seek for as necessary to explain them, and which he only briefly mentions as "a diseased condition of the supra-renal capsules." He evidently believed that any diseased condition of those organs might produce the same effects, for he recorded in his monograph, in connexion with the spurious cases to which I have referred, other diseased conditions of the supra-renal capsules totally different from the particular diseased condition which he had found in his own cases. This particular condition is, nevertheless, well described, as regards its naked-eye appearances, in the report of the post-mortem examination of one of his most typical cases (Case 3). "Each supra-renal capsule," he records, "was completely destroyed and converted into a mass of strumous disease, the latter of all degrees of consistency. The left supra-renal capsule had formed at the upper part a close connexion with the outer coat of the stomach. The upper part of this capsule seemed fluid and of the colour of pus, the lower firmer, and of the consistency of putty. The right capsule had all degrees of consistency from the bottom to the top, the lower part almost fluid and resembling pus, the centre putty-like; and above this matter could be detached in flakes, and at the top it was quite earthy, separate angular pieces being easily detached." Addison, however, gives no description of the microscopical appearances in this case, nor in any other, excepting one which was submitted to Dr. Hodgkin for examination. Dr. Hodgkin's report, though brief, corresponds in its main points with the reports of more recent observers. "The capsules," he says, "when cut into, seemed to consist of a firm, slightly transparent, reddish basis, interspersed with irregular spots of opaque yellow matter, the whole bearing a strong resemblance to an enlarged mesenteric gland mottled with tubercular deposit. The naked eye could discover no trace of cystiform arrangement, and the opaque matter, when examined with the microscope, exhibited a copious amount of fatty matter, but no nucleated cells." These characters I have frequently verified in genuine cases of Addison's disease, as being all quite accurate so far as they go.

I shall now proceed to describe more fully the pathological change in the supra-renal capsules, as I have observed it in careful post-mortem examinations of the same typical cases from which I have already drawn the clinical picture of the disease. The capsules are generally enlarged, hard, and nodulated, though in rare cases they are of normal, or even less than normal, size. On section they scarcely ever present any trace of the distinction between cortex and medulla, which is so obvious in the normal condition of the organs. In all the fresh specimens I have seen, the cut surfaces have presented a marbled appearance, from the admixture of two materials of different colours and consistence. One of these materials is a semi-transparent tissue, of firm consistence and of a grey or greenish-grey colour, at least when quite freshly cut, but, on being exposed to the air, it rapidly assumes a pink hue. The other material is of an opaque yellow or cream colour, and generally assumes the form of irregular roundish masses, of a more or less friable consistence, embedded in the translucent tissue, from which they can in many cases be easily enucleated. On close examination intermediate, gradations will often be seen between the translucent parts and the opaque cheesy nodules, and sometimes, again, cretaceous granules, or small masses, formed by the hardening of the cheesy matter, are felt to grate under the knife. More rarely the whole cheesy material dries up and hardens into calcareous masses, and it is in these rare cases that the capsules are smallest. Not unfrequently, on the other hand, the caseous matter softens down into collections of thick creamy fluid, called abscesses by some observers, which are found occupying larger or smaller cavities in the diseased capsules. In some cases the whole central part of the organ constitutes one large cavity filled with creamy fluid; but more commonly there are, if any, several small separate cavities, the fluid in which is of the same character, but of various degrees of thickness. It follows obviously, from this description, that the proportions of the translucent and opaque materials found in the diseased capsules differ greatly in different cases. In some few cases the translucent substance constitutes nearly the whole of the mass; in others the yellow friable matter greatly predominates, whilst in others again the normal tissue is almost entirely replaced by calcareous masses, or else by creamy fluid. All these gradations, however, depend solely upon the duration and the more or less acute or chronic course of the disease; the morbid process is identical in them all—a fact which, as Dr. Wilks pointed out, gives a greater definiteness to the disease than Addison himself conceived it to possess.

On microscopical examination the translucent substance is seen to consist of a fibrillated stroma, containing numerous lymphoid corpuscles. In some cases these corpuscles are arranged in rows between bundles of fibres, in others they are contained in a delicate reticular stroma. The opaque cheesy material is formed of amorphous granular matter, mixed up in variable proportions with irregular-shaped, shrunken cells, nuclei, and oil. Dr. Sidney Coupland found, on microscopical examination of the capsules from my last case, masses in every respect corresponding with the giant-cells believed by Schüppel to be distinctive of tubercle. Dr. Finlayson and Dr. Coates, of Glasgow, have mentioned the same fact in their report on a genuine case of the disease. The creamy-looking fluid contained in cavities of the capsules consists mainly of oily débris. It is evident, from these microscopical appearances, that the morbid process in the capsules consists, primarily, in their infiltration by an inflammatory exudation of low type, which first becomes gradually converted into fibrous tissue, destroying the natural structure of the organs, and finally itself undergoes caseous degeneration.

In every one of my own cases, and in a very large number of those which have been most carefully examined and reported on by other observers, clear evidence of inflammation in the cellular envelopes of the capsules has been afforded by great proliferation of their connective tissue, and also by the existence of firm adhesions to neighbouring organs,

such as the diaphragm, liver, pancreas, vena cava, kidneys, or stomach. It is probable, therefore, that in many other cases these conditions have been overlooked, or have remained unreported, their significance not being understood. Of course, such extensive overgrowth of connective tissue around the capsules cannot fail to invest the nerves of both the supra-renal and solar plexuses with dense indurated tissue; and, accordingly, when these nerves have been thoroughly examined, their fibrous investment has been found to be hypertrophied. The first careful dissection of the nerves in the neighbourhood of the supra-renal capsules, in a case of Addison's disease, was made by Dr. Habershon, who had previously published, in the Guy's Hospital Reports for 1856, a very valuable paper on the Abdominal Sympathetic and its connexions with the Phrenic and Pneumogastric Nerves. The results of his dissection of the nerves, in the case to which I have referred, were published in 1864 in the same series of Reports. He found the semilunar ganglia, and the branches of the nerves proceeding to the capsules, surrounded by an unusual quantity of dense fibrous tissue. In several of my own cases the same condition of the nerves has been found, though they have not been so thoroughly dissected out of the mass of hard tissue in which they were embedded. My colleague, Dr. Cayley, however, several years ago at my request, very carefully examined the supra-renal nerves in the body of a man who had died of Addison's disease in the Middlesex Hospital under Dr. Stewart's care. He found the nerves proceeding from the semilunar ganglia to the supra-renal capsules, and especially one branch of the great splanchnic nerve, at least twice the size of the same nerves in a healthy subject, dissected at the same time for the purpose of comparison. On microscopical examination, he ascertained that this increased size of the nerves was due to an increase in the fibrous investment of the nerve-bundles. Dr. Tuckwell, of Oxford, also made a very complete and skilful dissection of the nerves in a case of Addison's disease, recorded by him in the St. Bartholomew's Hospital Reports for 1873; in which case, as in two others he had previously dissected, he found "decided evidence of thickening, extending from the surface of the capsule to the supra-renal plexus, the semilunar ganglia, and thence up the great splanchnic nerve." This thickening of the nerves was found, on microscopical examination, to be caused by hypertrophy of their fibrous investment, and not by any apparent change in the nerve-fibres themselves. A similar condition of these nerve-plexuses in cases of Addison's disease has been verified also by several eminent foreign pathologists. Rindfleisch states, in his report on the microscopical examination of the nerves in a case of Kuhlmann's, that he found two large nerve-trunks, the fibres of which were undergoing fatty degeneration, bound up in the firm adhesions which attached the diseased capsules to neighbouring parts. Professor Tigri found, in a case of Burresi's, the semilunar ganglia considerably enlarged, and the nerve-fibres forming the solar plexus thickened by hypertrophy of the neurilemma, whilst the true nerve-portions were small. Hertz also reports that he found the cœliac plexus, particularly the semilunar ganglia, enclosed in hard connective tissue, with considerable thickening of the connective-tissue sheaths of the nerve-fibres going off from the ganglia; and Wölff observed the nerves of the solar plexus and semilunar ganglia, and the nerve-branches which go to the capsules, surrounded by a tough thick envelope of connective tissue. Bartsch, Van Andel, and others have reported similar conditions of the nerves.

In almost every case I have seen, the dense connective tissue surrounding the capsules has contained some enlarged lymphatic glands, and the same has been reported very frequently by others. The mesenteric and retro-perineal glands in the neighbourhood of the capsules are also generally enlarged. On section, these enlarged glands sometimes present only the normal appearances, but more commonly they are firm, glistening and pale-coloured, and, not unfrequently, in process of caseation. Microscopical examination of these enlarged glands sometimes reveals no obvious change of structure; in other instances, when they have been hard and glistening, the fibrous stroma has been seen on section to be much increased and the glandular elements atrophied. There is another morbid appearance which has been so frequently observed, both by myself and others, in cases of Addison's disease, that I feel justified in ranking it among the characteristic, though perhaps not quite invariable, lesions incident to the disease. I mean enlargement of the agminated and solitary glands of the small intestine, and sometimes likewise of the solitary glands of the large intestine. In many cases, also, the mucous membrane of the stomach, especially towards the pylorus, has presented a mammillated appearance, and the mucous surface has not unfrequently been covered with thick tenacious grey mucus. Small ecchymoses and, more rarely, superficial abrasions or small ulcers have also been found on the mucous membrane of the stomach, and in a few instances on that of the large intestine. Careful microscopical examinations of the mucous membrane of the stomach, in two different cases, by Dr. Coupland and Mr. Schäfer, have shown that the mammillations are caused by numerous overgrowths of lymphoid tissue around and between the gastric tubules. Some of these mammillations presented small depressions in their centres, which were ascertained by Mr. Schäfer to be due to "a breaking down and opening into the surface of the summit of the patches." Probably these depressions indicate the first stage of the small ulcers, which have been reported by other observers as occurring on the gastric mucous surface. Lastly, I must not omit to mention one other morbid organic change, which has been too often recorded in cases of Addison's disease to be passed over here, although I have no personal experience of its presence. In a very considerable number of genuine cases, including cases reported by Addison and Habershon, the spleen has been found to be enlarged, sometimes very greatly enlarged, and usually also dark-coloured and soft. It is worthy of remark that in very few of these cases had the patient, so far as was known, suffered from intermittent fever. There has, however, been no enlargement of the spleen in any of the cases which have been under my own care, and it is therefore quite certain that the disease may run its most typical course without presenting this lesion, and that consequently an enlarged spleen, though undoubtedly an occasional is by no means an essential feature in the morbid anatomy of Addison's disease.

Having thus delineated, as I believe, the true clinical and pathological features of Addison's disease, I must, in conclusion, observe, to prevent misunderstanding, that it is only in a certain number, even of the typical cases, that the striking clinical phenomena which I have described are all fully developed. The progressive asthenia, muscular debility, feeble circulation, and low temperature are invariably present in typical cases, and, in my experience, neither the loss of appetite and vomiting, nor the dyspnœa and faintness on exertion, have ever been absent in the later stages of the disease; but there is not perhaps one of the other characteristic symptoms which is invariably present. Every physician is sufficiently aware that this is equally true with respect to every other organic disease. It is only in the comparatively small number of cases in which an organic disease runs a long, uncomplicated chronic course that we can expect to observe the full development of all its characteristic symptoms. The absence of some of these, therefore, in complicated cases, or in cases of short duration, cannot be regarded in Addison's disease, more than in any other organic disease, as militating against the connexion between such symptoms and the pathological condition with which they are associated.

THE attention of sanitarians is so entirely devoted to the limitation of the zymotic class of diseases that there is reason to fear that other more or less preventable diseases are neglected. Mr. Liddle, in reporting on the sanitary condition of the Whitechapel district for the past quarter, urges that greater efforts should be made for reducing the mortality from affections of the respiratory organs than have hitherto been made. He regrets that so little power is given to local boards either to demolish houses unfit for human habitation, of which there are several hundreds in his district, or to regulate the construction of houses. In dealing with the difficult question of the weekly returns of deaths by the local registrars, Mr. Liddle proposes that it should be made compulsory on registrars to supply such returns to the medical officer of health at a fixed rate of remuneration to be paid by the local boards. It would be well, in recording the deaths in workhouses and hospitals, to insert in the returns the former residences of the patients.

ABSTRACT
OF THE
Gulstonian Lectures
ON
PUERPERAL FEVER.

Delivered at the Royal College of Physicians, London,

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LECTURE II.

ONE fact, as Cullen's remarks have suggested, had gradually become evident in his day to those who were interested in the question of the cause of puerperal fever: it was the great mortality that characterised its occurrence in public institutions and hospitals. Long before 1788, when Tenon gave a report of the serious condition of the wards in the Hôtel Dieu, several epidemics, as they were termed, had been heard of. For more than a century before Cullen's "Practice" was published—that is, between 1652 and 1783—we have notices of this kind. Every author referred to them more or less directly when writing on the subject in the latter part of last century. One of the most distinguished observers of the disease almost commenced his treatise with these words:—"The mortality attending the puerperal fever is truly lamentable. In the year 1750, at Paris, none who were seized with it recovered. In one hospital in London, in the space of two months, thirty-two patients were affected with that disease, and all except one fell victims to it."*

We may conclude that, though Cullen's views were probably generally entertained, yet in the minds of many who were engaged in active professional duties, and who were certainly not deficient in intellect and benevolence, there was no distinct idea that the mortality in lying-in institutions might depend on causes over which there could be exercised very considerable control; so that the question of treatment appeared to be much more important than that of the etiology of the disease.

I shall now ask your careful attention to a work which apparently produced no great impression at the time it was published, but which has since had an important influence on our views of the nature of puerperal fever. It is by Dr. Alexander Gordon, and contains evidence that the fever depends on a particular poison, which may be communicated by direct contact from one person to another, and that the occurrence of a number of cases of the disease is to be explained in that way rather than by atmospheric or other conditions—that is to say, that the disease does not occur epidemically. It is usual for modern authors to mention the names of Denman in England and Semmelweiss in Germany as the chief contributors to this important fact. When I say that these names are associated by modern authors, I mean simply that in our text-books we find some such sentence as the following:—"As a result of clinical observation on the one hand, the febrile puerperal diseases were proved with certainty to be due to secondary infection, first by the English (Denman), afterwards by the Germans (Semmelweiss)." I am now quoting from the German text-book on Pathology by Klebs.

The interval between Gordon and Semmelweiss of half a century was occupied chiefly by those important investigations into morbid anatomy and pathology, both general and microscopical, which have contributed to the improvement of every department of the medical profession, and particularly to the practical knowledge of diagnosis and etiology. It is to this source that we must look for modifications in general opinion concerning some of the phenomena of puerperal fever; and it will be, I think, most convenient to defer our inquiry into the value of Semmelweiss's observations till we have reviewed the progress of pathological research. The real reason why there was such an universal movement in that direction about the end of last century may be easily traced to a few powerful minds, like the two Hunters and those nearly associated with them, who clearly perceived that the pathological study of the effects of disease promised more than the study of symptoms.

The result of this method, as far as it influenced the subject of puerperal fever, was the introduction of several new terms into our nosology which were intended to describe the pathological conditions of different organs, structures, and tissues. Thus originated puerperal peritonitis, phlebitis, metritis, and some others. These terms, as we know, did not include any explanation of the remote cause which induced the changes observed by the pathologist. They all more or less involved the assumption that what is termed inflammation was their exciting cause, and the practical object of these terms was to connect local inflammatory processes with local and constitutional symptoms.

We have to notice the important extension of the theory of inflammation to the explanation of the connexion between that condition which was known as phlegmasia dolens and certain morbid changes in the structures of the venous system of the uterus; that is to say, when the symptoms which had previously been referred to metastatic lacteal secretion or pressure upon the lymphatics were found to depend upon obstruction to the venous circulation.

The term "phlebitis" assumes the possibility of the veins, as separate structures, being affected by inflammation. Various changes of their lining membrane, and the existence of pus within the vessels, were considered satisfactory evidence of inflammatory action; and then followed the theory of pyæmia or puerperal purulent infection arising from suppurative phlebitis. We will not stop to discuss just now whether these views were altogether correct. There is no doubt that, as far as the facts were concerned, they led to very important results.

It was shown that phlebitis might occur not only in the puerperal condition, but also as a consequence of suppressed menstruation; in cases, too, of malignant ulceration of the os and cervix of the uterus; in certain forms of tuberculous disease; also as a consequence of abortion, and after operations for fibrous and other tumours of the uterus. The theory of puerperal purulent infection was supported by the popular school of medicine in France, and was ably argued by the late Professor Trousseau. It never was very generally received amongst ourselves, for the reason that we did not find it in accordance with clinical experience.

We can easily understand how the theory of a particular diathesis was also employed to explain that condition of the veins which we term "thrombosis," or rather that state of the blood which was supposed to be the primary cause of its coagulation, and a further application of somewhat the same theory to tuberculous and cancerous cases, which assumed in the latter instance the more familiar title of "cachexia," was conveniently used to explain the occurrence of the various pathological conditions, and the symptoms arising from them which were found to be common to these diseases as well as to the puerperal state.

Instead of regarding a vein as a separate structure, and thus admitting the term phlebitis to be pathologically correct, it appears that we must refer the coagulation of the blood, which is the consequence of so-called phlebitis, to changes in the connective tissue which surrounds the vessels. On this point, therefore, we are obliged to differ from the pathologists whom Trousseau followed, as well as from those who consider that the tissue-changes are induced by coagulation of the blood or thrombosis, whatever that may depend upon.

There is not much difficulty in comprehending the process by which a vein becomes filled with coagulum in phlegmasia dolens, whether it occur in the puerperal state or under any other circumstances. Perhaps the best instance from which we can inform ourselves of the relation which the process of coagulation bears to that of cellulitis is one of those rapidly fatal cases of the disease in which the large vessels which unite to form the vena cava ascendens are filled with coagula. By removing the main trunks contained in the pelvis, together with the adjacent arteries, as high as the diaphragm, we can determine by dissection the exact points where the coagula terminate. If we then examine the condition of the cellular tissue surrounding the vessel under inspection, it will be found that the external changes are in advance of the coagulum, assuming that both processes are

* Gordon's Treatise on the Puerperal Fever.

taking place in the direction of the venous circulation. As a matter of demonstration, we may insert a needle through the vein at the point where the inflammatory changes are seen to terminate; and, on comparing its position with that of the termination of the coagulum, we may measure the distance between them. This may amount to an inch or more, but, to a great extent, it appears to depend on the number of the lateral veins that enter the vessel between those two points. The orifices of the lateral veins are generally distinguished by a small projecting coagulum, which is much less firm than that of the principal coagulum. The space between the two points is not empty, but the blood which it contains is in the same condition as that which fills the vena cava itself, and generally distends the right cardiac chambers. It is satisfactory to find that this view of the pathology of phlebitis, using the word under correction, is admitted by the leading pathologists in Germany, and that they are inclined to adopt it in preference to the theory of thrombosis or primary coagulation.

I have said that Semmelweiss's work consists chiefly of a collection of observations made by himself, without direct reference to the opinions of others. He does not omit, however, to mention the views of some few whom he was led to regard as the representatives of scientific thought, both in his own country and abroad. In this part of his work, however, it must be acknowledged that he gives proofs of possessing very limited knowledge indeed of the literature of his subject, and we cannot feel surprised that he finds but little difficulty in disposing of his opponents to his own satisfaction.

He brings his arguments together into a condensed conclusion at the end of his treatise in brief and forcible language. "I have shown," he says, "above that the excess of mortality in the first lying-in *clinique* in comparison with that in the second was occasioned by putrid matter, which was introduced by the hand of the examiner. I have shown that, in October 1847, the foul material of a foul cancer of the uterus produced puerperal fever. I have shown that, in November, 1847, a decomposing material from a carious knee-joint produced puerperal fever; how the fever was connected with the visits of the surgeons in one hospital in particular, and how the mortality during six years was reduced to less than one per cent. when all connexion with the surgical wards was broken off. It was the finger of the surgeon that carried the poison in the latter case; it was the atmosphere in the case of the knee-joint, and the air and the foul linen together in the *clinique* at Pesth, where the infection spread in spite of the washing with chlorine-water."

In their style of composition, in their arrangement of data, and their logical powers, it is more than probable that we should be inclined to claim for Gordon decided superiority over Semmelweiss. At the commencement of these lectures, I briefly alluded to the condition of mind which it is necessary for us to obtain in order to weigh fairly scientific evidence. It is easy to decide on the value of such evidence when we have tested it on the anvil of time. Observations and theories which have been conclusively analysed by that process naturally lose their interest. But when we are studying the pages of history, it is the lives and characters of those who thought, and worked, and benefited us, that we feel an interest in contemplating, as well also as the lives and characters of those who did not think and did not work, and stood in the way to oppose the progress of scientific and practical knowledge. The history of this fever, if it contained nothing but facts, with the dates of their discovery, would not be a long one. The history of the erroneous ideas and statements which were advanced on the subject of its origin and nature would far surpass it in dimensions. It has been said by one who has displayed singular scientific acumen in philological research that, "for the discovery of truth, there is nothing so useful as the study of errors." It may be useful certainly to the individual who pretends to originality; but, for our purpose, I venture to think we have done well in confining our attention to the more limited object with which we started, of tracing the progress of truth through its various stages of development.

DR. JAMES C. L. CARSON, of Coleraine, has been placed on the Commission of the Peace for the county of Londonderry; and Dr. John P. Bell for Hull.

ON

RECENT IMPROVEMENTS IN THE DETAILS OF ANTISEPTIC SURGERY.

BY JOSEPH LISTER, F.R.S.,
PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF EDINBURGH.

SINCE the delivery of my address at the Plymouth meeting of the British Medical Association in 1871, various improvements have suggested themselves in the means of carrying out the antiseptic principle. Some of these improvements have been the results of more extended experience with the materials previously in use, while others have consisted in the employment of new antiseptic substances.

With regard to materials previously in use, I wish in the first place to correct what I fear was a mistake made in the Address as to the strength of the watery solution of carbolic acid to be used for the sponges during operations, and for the cloths employed for washing and guarding wounds in changing dressings. Anxious to reduce the strength of the solution as much as possible, in order to avoid needless irritation of the tissues by the acid and at the same time to promote the comfort of the operator, I had thought myself justified by experience in recommending a lotion as weak as 1 to 100. I have since had reason to believe that in so doing I had gone beyond the limits of safety; so that I have returned to the 1 to 40 lotion for the purposes referred to, while the saturated watery solution (1 to 20) is still employed for purifying the epidermis of a part about to be operated on, for cleansing dirty instruments and sponges, and also for washing accidental wounds, so as to destroy once for all any septic organisms that may have been introduced into them.*

A solution of carbolic acid of the strength of 1 to 40 is that which I would advise for providing an antiseptic atmosphere in the form of spray when the particles of the liquid are dispersed by means of air impelled by hand-bellows or a condensing pump. But I have of late found it more convenient to use high-pressure steam as the motive power, on the principle of Siegle's steam inhaler, the apparatus, modified to adapt it for our purpose, being both self-acting and self-directing, so as to dispense with the services of an assistant. But in this case the water of the condensed steam dilutes the solution with which it becomes blended in forming the spray, so that it is needful to use a larger proportion of the acid. In the machines hitherto constructed one part of water is consumed by ebullition for three parts of solution sucked up to mingle with it, and thus 1 to 30 is the proper proportion of the acid in order to form a 1 to 40 spray.†

As a dressing for excluding putrefactive fermentation from wounds, the antiseptic gauze, which contains in its fibres carbolic acid stored up in common resin, which is of course insoluble in the discharges and holds the acid with great tenacity, has continued to prove thoroughly trustworthy if properly used; so that, provided always we have the essential condition of a sufficient space of skin in every direction from the wound for the gauze to cover, we may be quite sure that a wound left free from the causes of putrefaction when dressed, will be found similarly aseptic when

* For cases of compound fracture seen for the first time several hours after the accident, I have of late used a still stronger antiseptic in the form of one part of carbolic acid dissolved in five parts of spirit of wine, introduced into the recesses of the wound by means of a gum-elastic catheter connected with a syringe by a piece of caoutchouc-tube. In this way the antiseptic is made to penetrate the coagula in the various parts of the wound more effectually than it could be by forcing it in through the external orifice, while at the same time we avoid the needless disturbance which this procedure may entail in consequence of the irritating liquid being driven for a greater or less distance through the cellular interstices of uninjured parts.

† Different steam spray-producers may differ in this respect in consequence of slight variations in the relative sizes of the orifices for emitting the steam and lotion respectively. It is therefore right that in every case the actual proportion between the steam and solution consumed should be ascertained by the maker, and stated to the surgeon. In absence of such information the surgeon can readily settle the point for himself by working the spray for a while with given quantities of water in the boiler and lotion in the bottle, and then measuring the amount remaining in each vessel.

we change the dressing—a fact which no one, perhaps, who has not gone through the labours and anxieties which have fallen to my lot in striving after its attainment can fully appreciate. Under ordinary circumstances we still use the gauze in eight layers, with a sheet of some trustworthy impermeable tissue placed beneath the outermost layer to prevent the discharge from soaking directly through the dressing, for if it did so a copious effusion might wash out the antiseptic from the part immediately over the wound and putrefy within twenty-four hours. The most durable and therefore most reliable material for the purpose, consistent with the requisite lightness, is a fine cotton cloth with a thin layer of caoutchouc on one side, known in the shops as hat lining or thinnest mackintosh. This, if of good quality, may be used for the same case for weeks together. But, unless particular care is taken with its manufacture, the caoutchouc layer tends to adhere in the folds which it acquires from the various altered positions of the dressing, and portions of it may then be torn off when the folds are straightened out, thus destroying the essential property of impermeability; and if the mackintosh be still used in that condition, entire failure of the dressing may result.

I have just now under my care a case in which I opened antiseptically an abscess connected with disease of the hip-joint, where all went on typically for a considerable time, the discharge being merely serous, and so diminished in quantity that the dressing was left unchanged for several days together, when, in consequence of imperfection of the mackintosh, the discharge was observed to have soaked directly through the dressing opposite the wound, and, apparently as a result of this, putrefaction had crept in, which soon led to profuse suppuration and hectic, necessitating excision of the hip-joint.

It is therefore needful to have this material specially prepared to obviate the tendency to adhesiveness.* And in all cases a second piece of the mackintosh should be at hand, so that when one piece is observed to become impaired by wearing, the other may be substituted for it.

The mackintosh having no antiseptic property except mechanically by its impermeability, but, on the contrary, being, like other indifferent materials, covered more or less with septic matter, it is necessary, when the dressing is a compound one, or, in other words, consists of more pieces than one, that the mackintosh be well covered in at the place of junction of the two pieces, for if it were allowed to project uncovered in the vicinity of the wound, it might communicate septic mischief.

As an example of a compound dressing may be given one which, from the frequency of the cases requiring it, is the most important of all—viz., that used after removing the mamma. It consists of two pieces of folded gauze and mackintosh, a posterior and an anterior one. The posterior portion is about half a yard square, and reaches vertically from above the acromion to a little below the elbow, and transversely from the spine to the arm, which it envelopes as it lies beside the chest, thus forming a complete antiseptic basis for the region of the shoulder, and effectually guarding against what would otherwise be most difficult to avoid, the extension of putrefaction from the bedding through the axilla into the outer angle of the wound. The anterior dressing, though not so broad as the posterior one, is of about equal length, so that when applied to the chest it may reach from some inches beyond the anterior angle of the wound to the posterior dressing, which it joins below the back of the axilla; and here it is that it is needful to have the mackintosh well covered in among the folds of the gauze. The infra-axillary region being the part where the chief discharge occurs, it is of the utmost importance that the outer part of the anterior dressing be maintained well in apposition with the skin, and this is ensured by stuffing a substantial mass of gauze irregularly packed together between the patient's side covered by the dressing and the lower part of the arm. This additional mass of gauze has the further advantages that it serves as a supplementary antiseptic material to absorb the discharge, and that it prevents the arm from being closely pressed to the side—a position which, besides being irksome to the patient, would entail the serious evil of interference with free drainage from the outer angle of the wound. In order to prevent the occurrence of bedsore over the external condyle a wisp of gauze, twisted and rolled together in the form of a ring, is placed beneath the elbow so as to receive the bony prominence in its hollow. The whole dressing is secured in position by suitable turns of a gauze bandage, which is extremely convenient on account of its lightness, and also from the circumstance that the slight adhesiveness of the material with which it is charged checks the tendency of one turn to slip upon another, so that it is more secure than a common cotton roller, besides the advantage that it increases the antiseptic efficacy of the dressing. But, on account of its loose texture, it cannot be properly fixed by ordinary pins, which would be liable to shift their position in it. Those called safety-pins, made on the principle of a brooch, should therefore always be employed; for there are cases in which the slipping of a single pin might, by allowing the dressing to shift its place, endanger the life of a patient.

There is another point in the use of the gauze to which I wish to direct special attention. The very quality which makes this material so valuable as a permanent antiseptic dressing, and renders it both mild and persistent in its effects—namely, the tenacity with which the resin in its fibres holds the carbolic acid—may become a source of serious danger at the time of application. For at ordinary temperatures of the air the antiseptic is given off by the gauze in such extremely small amount that particles of dust falling upon it cannot be expected to be deprived of septic energy by contact with it, as they are by a 1 to 40 watery solution. Hence, if a piece of gauze is applied dry to a wound communicating with a cavity containing blood, serum, or pus, as in a compound fracture, a stump after amputation, or an abscess, portions of septic material on the surface of the gauze may become mingled with the discharge at the outlet, and, thus shielded from the subsequent action of the carbolic acid, may spread fermentation into the interior. Had it not been for the use of the spray, which plays on the under surface of the gauze when applied, I cannot doubt that this cause would often have led to failure. But considering the very short time during which the spray often acts on the gauze, it is plain that it would be imprudent to trust to it for purifying the surface. This, however, can be done with the utmost readiness, either by wetting with the 1 to 40 lotion the part of the gauze dressing which is to go next to the wound, or, what is commonly more convenient, by applying to the wound itself a separate piece of gauze soaked in the lotion, and over this the dry gauze in its eight layers. When the discharge is slight, a single layer of this moist loose gauze is sufficient, but if it is copious the wetted portion must be substantial.

In situations where there is not as much extent of skin for the gauze to overlap as is desirable—for example, in the vicinity of the pubes, as after herniotomy—the deficiency of surface of the dressing may be compensated by using the gauze in a thicker mass; say in sixteen or thirty-two layers. By this means such wounds may be securely kept from putrefaction, which with only eight layers it might be impossible to avoid.

Details like these, tedious as they are to describe, are of course very easy of execution, and attention to them will, I doubt not, be rewarded, in the hands of others as it has been in my own, by a constancy of results which leaves little if anything to be desired.

With regard to the times of changing the dressing, it is, as a general rule, prudent to inspect the wound the day after its infliction, whether it be accidental or the result of operation. But during the subsequent progress of the case the gauze may be left undisturbed for periods varying from two days to a week, in proportion to the diminution of effusion; the general rule being that the dressing should be changed on any day on which the discharge is observed to have extended beyond the edge of the folded gauze so as to make a stain upon the clothes or bedding.

Invaluable as the gauze is, I greatly regret to find that its use is restricted by the high price at which it is often sold. I will, therefore, now describe the manner in which it has been prepared for a long time past at the Royal Infirmary of Edinburgh, with the effect of reducing by more than half the wholesale price previously paid by the institution. First I may remark that the chief element in the cost is the cotton cloth, the expense of the materials with which it is charged being less than a farthing per square yard of the gauze. It is therefore of great importance to obtain the muslin as cheap as possible from the manufacturer, and

* It is best supplied, so far as I know, by Messrs. Mackintosh, of Manchester.

a little saving is effected by having it unbleached.* The materials used for charging the gauze are—1 part of crystallised carbolic acid, 5 parts of common resin, and 7 parts of solid paraffin; the last ingredient being used for the purpose of preventing undue adhesiveness. Paraffin has this advantage compared with any other substance of similar consistence with which I am acquainted, that it does not blend at all with carbolic acid in the cold, and therefore simply dilutes the mixture of acid and resin, without interfering in the least with the tenacity with which the resin holds the acid. If, for example, we compare it with a substance like spermaceti, we find that a mixture of 1 part of the acid with 5 parts of resin and 5 parts of spermaceti is really much more pungent to the tongue than the 5 parts of resin and 1 of acid alone. For although the former mixture contains only half the quantity of the acid, yet the spermaceti, blending with the acid like the resin but holding it less firmly, takes the acid from the mixture and gives it up to surrounding objects. Such a mixture of resin, spermaceti, and carbolic acid, therefore, though admirable in consistence, would be both less mild and less permanent in action than the resin and acid alone. The addition of paraffin, on the other hand, has no other effect on the mixture than to render it somewhat more mild. It seems needful to point out this circumstance, because, from want of knowledge of it, modifications of the gauze have been suggested in which the paraffin has been replaced by other materials, which cannot fail to be disadvantageous.

In order to charge the gauze, the paraffin and resin are first melted together in a water bath, after which the acid is added and blended by stirring. The object now is to diffuse this melted mixture equably through the cotton cloth, and for this purpose two things are requisite—viz., that the cotton be at a higher temperature than the melting point of the mixture, and that it be subjected to moderate pressure after receiving it. The cotton cloth, a yard wide, is cut into six-yard lengths, and these, having been folded so as to be half a yard square, are placed in a dry hot chamber formed of two tin boxes placed one within the other, with an interval to receive water, which is kept boiling by fire or gas beneath, the upper edges of the boxes being connected and provided with an exit pipe for the steam. There is also a glass tube arranged as a gauge of the amount of the water, and the chamber has a properly fitting lid. The bottom of the chamber is strengthened with an iron plate, to enable it to bear the weight used for compressing the gauze when charged. This is a piece of wood, about two inches thick, nearly fitting the chamber, covered with sheet lead, so as to make it about as heavy as a man can lift by means of two handles in the upper surface. The weight is heated along with the cotton, and is put first into the chamber so as to leave the cotton loose for the penetration of the heat, which occupies two or three hours. The cotton, when heated, is taken out of the chamber along with the weight, and placed in a wooden box, to protect it from the cold. (It would be better to have a second hot chamber for this purpose, since in cold weather the cotton is apt to be too much cooled in spite of the protection of the wooden box.) The heated gauze is then at once charged with the melted mixture of carbolic acid, resin, and paraffin, in quantity equal to the weight of the cotton fabric (or slightly less), and, in order to diffuse the liquid as equably as possible, it is sprinkled over the gauze by means of a syringe with a number of minute perforations in its extremity, the body of the syringe and the piston-rod having each a wooden handle to protect the hands of the workman from the heat. The syringe is constructed to hold half the quantity of the mixture required for charging one piece of cloth. One folded piece being placed at the bottom of the hot chamber, its upper half is raised and turned aside, and one syringeful is sprinkled over the lower half. The upper half is then put back into position and another syringeful thrown on. The same process is repeated with all the other pieces of gauze, after which the weight is put into the chamber to compress the charged cotton, and the lid applied. An hour or two are then allowed to elapse to permit the complete diffusion of the liquid, when the material is fit for use.

The apparatus above described can be constructed by a common tinman for about £10; and it is estimated that the entire cost of the gauze to the Edinburgh Infirmary, including the price of materials and manufacture, is somewhat less than 2*d.* per square yard. For hospital purposes this expense is further reduced by the fact that the gauze, after being used for dressing a case, can be entirely cleansed of the substances with which it was charged by washing in boiling water, care being taken to press it well in the hot water with a suitable wooden implement. The cotton cloth is then even better adapted for the purpose than it originally was, having lost the slight rigidity caused by the starch or gum used to stiffen the threads before weaving. Thus the same piece of cotton may be used over and over again, with saving to the institution of the chief cost of the material, which, as before said, is that of the cotton. Practically, however, it is only larger dressings which will repay the trouble of washing and arranging in proper masses for recharging.

(To be continued.)

* Messrs. Lang and Cousin, 42, Ingram-street, Glasgow, supply the unprepared gauze at the wholesale price of 1½*d.* per yard.

ON THE CHEMICAL STATICS OF THE BRAIN.

BY J. L. W. THUDICHUM, M.D.

(*Concluded from p. 333.*)

THE group of the phosphorised principles is divided into three sub-groups, already mentioned. Of these the first to be considered is *the sub-group of the kephalins*. It comprises—

Kephalin, $C_{42}H_{79}NPO_{13}$.
Kephaloidin, same formula.
Oxykephalin, $C_{42}H_{79}NPO_{14}$.
Peroxykephalin, $C_{42}H_{79}NPO_{15}$.

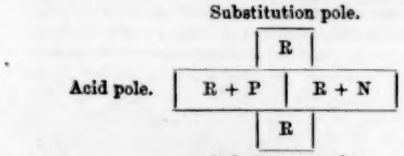
These contain the nitrogen in one form only. But other members of the group contain the nitrogen in two forms, and have therefore much larger and more complicated formulæ. These formulæ I will define under myelin. All the kephalins contain fatty acid radicles with which chemistry is at present unacquainted; they contain a larger proportion of oxygen than the radicles at present known. The kephalins vary in the amount of their oxygen in a manner so as to be sharply characterised thereby. This variability of the constituent oxygen may be transitional, but must not be confounded with that remarkable reaction of the bodies of this group which I describe as their oxidisability.

The kephalins by chemolysis yield new fatty acids—kephalic and oxykephalic; further, glycerophosphoric acid and choline and neurine. The more complicated kephalins yield a second base, the platinic hydrochlorate of which is soluble in alcohol. On the whole, the individuality of kephalin is so strong and remarkable that it may be classed amongst the best characterised animal principles. Kephalin, as obtained by the alcohol and ether process, without the aid of acids or salts, but purified by solution in water and filtration, is mainly in the free state; but a portion is combined with ammonium, sodium, potassium, calcium, iron, copper, and with calcic and magnesic phosphate. These bases and salts are easily abstracted by acids. In some experiments the calcic and potassic salts were found prevailing greatly in quantity over the others; none were ever absent.

The second sub-group of phosphorised bodies are the *myelins*, of which the typical simplest form has the formula $C_{49}H_{75}NPO_{10}$. It must not be confounded with the myelin of microscopists, which is necessarily a mixture of several varieties of phosphorised principles with several fats and cholesterin. Myelin, when freshly obtained, is white, like bleached ivory, but on keeping becomes a little yellowish and waxy. It crystallises in needles and curved rhombic plates. When dry it can be powdered. It emulges with water and dissolves in the imperfect manner above described. It combines with platinic and cadmic chloride after the manner of ammonium bases, and with lead after the manner of a dibasic acid. It contains four principal radicles, of which glycerophosphoric is one, cholin or neurin another; and to these are attached two acid radicles

of varying value and composition, but most commonly consisting of margaric acid, with 16 C, or the amidated form of that acid.

This leads me to the consideration of a peculiarity of some of the phosphorised bodies already alluded to under kephalin. In the simplest forms of all of them, N is to P=1:1, or they contain exactly one atom of each of these elements. For these I adopt the structural formula:—



This formula shows at a glance that the body has acid properties, and at the acid pole will combine with bases; that it has basic properties, and at the basic pole will combine with acids; the neutral or substitution poles are occupied by the fatty acid radicles. If in the free state, the acid pole will neutralise the basic one, and the substance may then be considered as a fat or an ether.

We find myelins (and I believe that the greater portion of that contained in the brain is of this kind) which contain more nitrogen than phosphorus in the proportion of 2 to 1, or 3 to 2, or 5 to 3. In these cases I assume the increase of the nitrogen to be due to the presence of an amidated fatty acid radicle, such as I have proved by chemolysis to occur in the rarer forms of kephalin.

The *lecithin* sub-group is undoubtedly also contained in the brain, but I have not yet succeeded in isolating any in the pure state; for when isolated in the only form in which it can as yet be separated from the other brain-matters—namely, in the form of platinic chloride hydrochlorate—it immediately begins to decompose, and completes its decomposition during the steps necessary for its purification. From its compounds we know that its composition is $C_{42}\ H_{83}\ NPO_9$. This formula is also supported by the sum of its cleavage products. The occurrence of these cleavage products in several diseases furnishes hints as to the processes by which they arise.

The chemical characteristics of these sub-groups may be summarised thus: the kephalins possess the tendency to be oxidised—oxidisability; the myelins are not easily changed by any agent or influence, and possess therefore stability; the lecithins easily fall to pieces, they are afflicted with lability.

In language more technically chemical, the kephalins have on the outside of their molecule free affinities for oxygen. This gas they bind in several ways. When the oxygen combined with a molecule has attained the maximum, oxidation ceases without decomposition ensuing. The kephalins are not in a state of atomic tension, and therefore do not fall to pieces so easily, but require for vibration into permanent decomposing distances the influence, continued for some time, of powerful extraneous affinities in the presence of water and heat.

The myelins have no apparent free affinities for oxygen; they are not affected by heat to and above the boiling-point of water, except to the extent of fusion; their atoms are not in a state of tension, but require for lysis the influence, continued for some time, of powerful extraneous affinities, water and heat.

The lecithins, however, are in a state of great atomic tension, and therefore slight external affinities or dissociating impulses suffice to effect their decomposition.

The presence of water diminishes the number or avidity of affinities in all these sub-groups. When the colloidation above described is at a maximum, the dissociating faculties of the members of these sub-groups seem to be at a minimum. The watery solutions do not decompose in stoppered bottles for many months. It seems therefore that water satisfies some of their affinities, and, what is most remarkable, its influence increases and diminishes with the mass which is present and capable of acting, so that it displaces, when in quantity, other combinants; but when these other combinants prevail, water is itself instantly displaced, and the colloid state instantly disappears. In the dilute watery solutions of the phosphorised bodies, therefore, almost every reagent soluble in water, when added in a certain excess, produces a precipitate, which contains the reagent in combination. But when water or any watery solvent, capable of dissolving the combined reagents is brought in contact with the compound, the compound immediately dissociates; the reagent passes into the water *pari passu* as the phosphorised body passes into the hydrated colloid state, and if the influence of the water is continued by renewal, the process terminates by a complete separation; the phosphorised body is again free and pure, and swells and dissolves as at first.

The reagents with which the phosphorised bodies are thus able to combine, and from which they are dissociated by water, are acids, alkalies, and salts. The phosphorised bodies therefore possess alkaline affinities (for acids), acid affinities (for alkalies), alkaloid affinities (for salts). All these affinities are overcome by water in quantity, but the affinities for water are overcome by some metallic oxides, such as of lead, copper, manganese, iron, and even to a slight extent by lime and potash. These latter compounds are dissociated only by strong mineral acids, and the compounds can then be dialysed out. All other combinants separated by water alone can be completely removed from the phosphorised substance by dialysis on a diaphragm of parchment paper. We have, therefore, here a diversity of affinities such as is not possessed by any other class of chemical compounds in nature at present known, and the exercise of these affinities being greatly influenced by the mass of reagents and the mass of water which may be present, the interchange of affinities may produce a perfectly incalculable number of states of the phosphorised, and, consequently, of brain-matter. This power of answering to any qualitative and quantitative chemical influence by reciprocal quality or quantity we may term the state of *labile equilibrium*; it foreshadows on the chemical side the remarkable properties which nerve-matter exhibits in regard of its vital functions. From this it also follows that nerve-matter (if only as characterised by the phosphorised bodies) must yield obedience to every, even the slightest, external chemical influence which may reach it by way of the blood. It must take up metals, acids, salts, alkalies, and alkaloids presented by the blood; it can retain only oxides when the serum is again free from the combinants; a watery serum will wash the brain, a more watery one will make it swell and displace mechanically, within physiological limits, what it can; a still more watery one will make the brain dropsical, and produce all the conditions of mechanical pressure on the brain. All these processes are the necessary consequences of the affinities of the phosphorised substances; and, these being known, the phenomena could be predicted, if they were not sufficiently known as phenomena, though hitherto destitute of an explanation. Thus the so-called brain-fungus—the continued protrusion of brain-matter through apertures of the skull produced by mechanical injuries—may, in certain cases, find a physical explanation in simple excessive hydration of phosphorised (and nitrogenised) principles, producing general intra-cranial pressure. The explanation of many cerebral phenomena in dropsies follows from these data almost as a matter of course.

These few examples show that the acquisition of chemical statics leads almost necessarily and very easily to chemical dynamics of the brain; and these will, in their turn, furnish data for physiological and pathological conclusions. But these deductive arguments must be most sparingly and cautiously used, until the statics are in a state of perfection and completeness. To argue too far from incomplete data would, in view of the history of biological chemistry during the last thirty years, be a deplorable error.

The *nitrogenised* substances of the brain imitate, in many respects, but in a less degree, the properties of the phosphorised. Thus they have the affinity for water to the extent of swelling to gelatinous masses; but they do not go to the state of apparent solution, and do not pass paper filters under any pressure.

Their chemical character, compared to the phosphorised bodies, is slight solubility. They are firm compounds, with little atomic tension. They possess substitution poles, where hydrogen is replaceable by metalloids or compound radicles; and these compounds seem more stable, and to admit of isolation to some extent, while the compounds with salts, oxides, or acids are so unstable as not to admit at present of quantitative definition.

Under this group I describe *cerebrine* ($C_{17}\ H_{33}\ NO_4$,

Müller), or rather $C_{34}H_{66}N_2O_3$, only found once in man in the isolated state.

Phrenosine, $C_{34}H_{67}NO_3$. This occurs mixed with the former, but has been isolated in quantity.

Kerasine,, $C_{46}H_{91}NO_9$. Crystallises in fine needles; only little is obtained in the pure state as yet, while much is no doubt present in all brains.

Possibly further individuals will have to be separated from this group and its sub-groups. They all give a purple reaction with sulphuric acid and sugar, like biliary acids, and are insoluble in ether. They form peculiar derivates, which, first observed by Couerbe and believed to be specific, were by him named *stearoconote*. I have succeeded in transforming it back into the original principles. It seems merely a molecular change by heat, which makes the body insoluble in alcohol.

The *oxygenised principles* of the brain are very important. Two, in particular, are present in large quantities—*cholesterin* and *inosite* ($C_6H_{12}O_6$. $2H_2O$). Cholesterin is undoubtedly an alcohol; inosite perhaps an aldebyde, with properties of an alcohol. The latter would be freer to act by its solubility in water, which cholesterin has not got. Cholesterin can only be dissolved by the aid of the phosphorised matters; its *rôle* is probably, in part, thereby determined; but its intrinsic chemical dynamis is probably also independent, as its atomic weight is very high.

The other oxygenated principles, except lactic and formic acids, of which minute quantities occur, have not even been treated statically, and are therefore not disturbed from their historic slumber.

The water extract of the brain contains yet many remarkable bodies, amongst them undoubtedly an *alkaloid*, which I have isolated and am engaged in investigating further. It is possible that several bodies of this remarkable class are present by the side of each other.

The *mineral ingredients* are in part well known, but have to be reinvestigated with regard to their distribution. The albumen contains much fixed alkali, earth, and metal, in combination, just as the phosphorised matters do. Iron, copper, and manganese are undoubtedly always present in brain-matter.

I believe that by continued investigation the brain can be made to give up the whole of its mysteries, and to become the chemically best known organ of the animal body. But the information which is now wanted can probably be secured hereafter only by the manipulation of quantities of material on a scale such as no enterprise in biological chemistry has hitherto had the opportunity of adopting. In particular the necessity for the ultimate perfect purity of the principles to be established creates the necessity for such quantities.

I also have no doubt that these results will be capable of being made available rapidly for practical purposes, particularly the treatment of disease and the administration of medicines. Nearly the whole of therapeutics is based upon the influence of chemical agents on the body or its parts, and amongst these the brain evidently takes a governing place. Still more hope have I conceived from these investigations as regards diseases special to the brain and nerves. The elaboration of these ideas I must leave to the future, to my kind audience, and to my philosophical profession.

CLINICAL ESSAYS.

BY T. PRIDGIN TEALE, M.A., F.R.C.S.,
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No. V.—ON EXPLORATION OF THE ABDOMINAL CAVITY IN EXTREME CASES OF OBSTRUCTION OF THE BOWEL IN WHICH THE SEAT OF OBSTRUCTION IS UNKNOWN.

THE case on which this essay is based is of interest as illustrating the advance which is being made in an important department of surgery—"the surgery of the peritoneum." In a clinical essay (No. IV., THE LANCET, May 2nd, 1874), on "Ovariotomy in Extremis," I spoke of the teachings of ovariotomy, and of the encouragement those teachings held out to a greater freedom in dealing surgically with the peritoneum, in conditions in which the patient has often been abandoned to his fate. These remarks had been anticipated in principle, and almost in words, by Mr. Thomas Smith in his paper "On some Points in the Surgical Treatment of Intra-peritoneal Injuries" (St. Bartholomew's Hospital Reports, vol. ix.)

The idea of opening the peritoneal cavity in order to determine the exact seat and cause of obstruction of the bowel, and as a preliminary step to further operation (in the present instance lumbar colotomy) has, I believe, been rarely carried out in practice, and still more rarely with success. It has, however, received encouragement from the case of *intussusception* recently published by Mr. Hutchinson, in which he rectified the invaginated bowel. If further experience should strengthen the growing surgical opinion in favour of greater boldness in opening the peritoneal cavity, we may look for as great an advance in the management of many obscure, and hitherto hopeless, cases of obstruction of the bowel as has taken place in the treatment of the once deemed hopeless cases of ovarian disease.

The following is the history of the patient, the subject of this paper, who was exhibited in good health and vigour at the meeting of the Leeds and West Riding Medico-Chirurgical Society, Oct. 2nd, 1874.

Joseph W——, a butler, aged forty, first consulted me in October, 1873, on account of a very severe pain in the small of the back, from which he had suffered for two or three months. The pain was often distressing when he was moving about, but was most severe at night, frequently depriving him of rest. He also passed blood and mucus from the bowel, and his evacuations at this time were small and narrow. On examination I could not detect anything amiss with the rectum, which was of natural capacity, and free from any ulceration or tumour that could be detected by the finger. He was advised to rest at home from his work, and to use morphia suppositories. Under this treatment, aided by careful regulation of his diet, the evacuations became perfectly natural in appearance, form, and consistency, but the discharge of blood and the pain did not cease. Five weeks later he was seen by Mr. S. Hey and Mr. Oglesby, and a small tumour was felt near the left iliac fossa. He was then ordered to take small doses of Dover's powder, and to make further modifications of diet, the result of which was, that the discharge of blood gradually diminished, and since Christmas last has not reappeared. At Christmas he resumed his work, though suffering at times as much as ever from the pain in the back. From Christmas to June he got on fairly well, easing his pain by suppositories and Dover's powders, and having a *solid, fully-formed evacuation* daily, free from blood and mucus.

In the middle of June the action of the bowels, which up to this date had continued to be perfectly natural, was suddenly arrested; aperients and enemata were of no avail, and the body became intensely tympanitic. At the end of ten days, during which no relief could be obtained, by the advice of his medical attendant, Mr. Atkinson, he was admitted under my care, at the Leeds Infirmary, on July 1st, 1874.

After his admission, he was treated by nutritive enemata and hypodermic injections, with a very small allowance of brandy-and-milk by the stomach.

At the end of four weeks from the commencement of the complete obstruction all hope of spontaneous resolution was abandoned. During the latter three or four days he had suffered excruciating pain, had lost flesh rapidly, and had several times been delirious; and it seemed as if, unrelieved, he could not possibly live more than three or four days. After several anxious consultations, my colleagues and myself came unanimously to the conclusion—(1) that the time had arrived when further delay would not be justifiable, and that an attempt ought to be made to relieve him by operation; (2) that no certain opinion could be formed as to the situation of the stricture; (3) that I should be justified in opening the abdominal cavity in order to search for the seat and the cause of the stricture, and to determine the possibility of relieving the obstruction by right or left lumbar colotomy.

Operation, July, 1874.—The patient being under the influence of chloroform, an incision was made in the middle line below the umbilicus, about five inches in length, which

enabled me to introduce the hand between the distended intestines and the tense abdominal wall. The first points made out were the distended cæcum and the junction of the ileum with the colon. I then traced the ascending colon and the transverse colon, which latter, owing to its extreme distension, first descended to the pelvis and then doubled back and ascended in front of the left lumbar region to the left kidney, lying in front of and concealing the descending colon. Finally, below the crest of the ilium the distended bowel was felt to terminate in a hard mass of the size of a walnut, apparently attached to the bowel, and puckering it. It was clear, therefore, that left lumbar colotomy would give the relief desired. Five wire sutures were then introduced into the wound and tightened temporarily as far as was deemed prudent, considering the tense state of the abdomen. The patient having been turned to a prone position, the usual operation of Amussat was performed in the left loin. The opening of the colon was followed by a large escape of flatus and of semi-fluid fæcal matter, which so far reduced the distension of the abdomen as to allow me to tighten up the wire sutures and effectually to close the wound in the front of the abdomen.

His progress after the operation was without a drawback. In a day or two he was able to take food almost ravenously, he rapidly gained flesh, and did not suffer the slightest discomfort or inconvenience from the abdominal wound. He is now (Oct. 3rd) better, stouter, and stronger than he has been for several months, and is anxious to resume his duties as butler. Four-fifths of his evacuations are passed per anum, and he has practically no inconvenience from the lumbar anus, except when his bowels are relaxed by purgatives. He still suffers great pain in the back, which is relieved by hypodermic injections twice a day. On examination of the body, a hard tumour of the size of a billiard-ball can be felt midway between the anterior superior spine of the ilium and the linea alba. For the first day or two large quantities of liquid fæcal matter escaped by the lumbar opening, and about the third day some solid scybalous matter was evacuated per anum, the passage of which was attended with very severe pain. By degrees more and more of the contents of the bowel escaped per anum, until at last not more than one-fifth passed through the lumbar opening.

Jan. 11th, 1875.—He reported himself at the hospital today, looking remarkably well, and feeling stronger than he has done for twelve months. He has now resumed his duties as a butler. It is, however, to be feared that the original disease is gaining ground, as but little fæcal matter is evacuated per anum, and he has still much pain and bearing down at the rectum.

Remarks.—1. The question may fairly be asked—Seeing that a tumour could be felt in the neighbourhood of the sigmoid flexure, why was not colotomy performed in the left loin, without submitting the patient to the additional risk of opening the peritoneal cavity in order to search for the stricture? The reasons which influenced me, and with these reasons my colleagues agreed, were these:—(*a*) the absence of any evidence of stricture to be obtained by examination of the rectum, such as a tumour, or the dilated state of the lower bowel, so often found where there is stricture high up in the rectum; (*b*) the absence for many months of the discharge of blood and mucus from the anus; (*c*) the absence of chronic diarrhœa; (*d*) the fact that for many months, and even *up to the very date* of the obstruction, the evacuations had been perfectly natural in *size, form, and consistence.* Further, the risk incurred in opening the peritoneal cavity for the purpose of search did not seem to be great nor equal to the risk involved in performing lumbar colotomy when in doubt as to the site of the stricture.

2. Ovariotomy has taught us that a peritoneum altered by recent or remote inflammation can bear exposure, handling, and cleansing in a manner truly astonishing. In this case, however, we had a healthy peritoneum. My confidence as to the impunity with which a healthy peritoneal cavity could be opened and explored rested mainly on this—viz., the recollection of the frequent occasions in which, in strangulated hernia, a healthy peritoneal cavity is opened, and several inches and even coils of intestine are handled and sponged, and are manipulated and returned into the abdominal cavity without the occurrence of any unfavourable consequences. This confidence was strengthened by the belief that one great cause of peritonitis after ovariotomy is the presence of blood which either escapes into the peritoneal cavity after the completion of the operation or has been left behind by the operator.

Postscript.—Having on two occasions recently opened the peritoneal cavity in patients who appeared to be on the point of sinking, and in each instance without success, it is right that I should refer to them on the present occasion.

CASE 1.—A patient on the fourth day after ovariotomy seemed to be sinking rapidly, having a pulse that could hardly be counted, her body distended with flatus, hands cold, and with no passage of flatus per anum. Having reopened the wound, I found the intestines glued together by a very thin layer of lymph. On passing the finger towards the pelvis and separating the coils of adherent intestine, I gave exit to about half an ounce of serum. Lastly, I punctured with a trocar the intestine which was exposed at the wound, in order to allow the escape of the flatus. For two days the patient rallied and took some food, and then flagged again, and died on the eighth day.

On this case I would remark—1st. That I do not attribute the temporary rallying to the reopening of the peritoneal cavity. 2nd. That, on the other hand, no additional risk was inflicted on the patient, nor harm done by opening out the wound. On the whole, good rather than harm was the outcome of it. 3rd. That, whereas tapping of the flatus in distension of the intestines is often of extreme value in mechanical occlusion of the bowel, where the peristaltic movements of the intestines are free to act, and are constantly passing the flatus onwards to the obstructed point, the same good result from tapping does not seem to take place when the flatulent distension results from interference with peristaltic action by inflammation, and the consequent gluing of the intestines to one another. In the latter case the tapping empties merely the contiguous six or eight inches of bowel, and the rest of the intestine is as incompetent as ever to pass on the gas. 4th. It seems likely that the opening of the peritoneal cavity in peritonitis will prove of less value in the milder plastic form, in which the intestines are glued together, than in the more severe and more rapidly fatal forms attended with effusion of acrid fluid and pus, with little or no glueing of the intestines. At the same time, it is probable that to open the peritoneal cavity in peritonitis of any kind in which life is in great peril, does not diminish the chances of recovery.

CASE 2.—A gentleman, about sixty years of age, having been for a year or two in failing health, was suddenly prostrated on Sunday, Nov. 8th, 1874, by a severe pain in the right iliac fossa. This pain was rapidly followed by vomiting, flatulent distension of the body, and collapse. I saw him next day, when the extreme urgency of the symptoms had somewhat abated. The body was still tympanitic, and there was a suspicious fulness in the neighbourhood of the cæcum. He told me that some years previously he had suffered from a right inguinal hernia, which had not descended for three or four years. As there was no evidence of any hernia in the inguinal canal, and the first severity of the symptoms had diminished, I did not feel justified in urging an exploratory operation, which would probably involve the opening of the peritoneal cavity. The symptoms continued much the same the following day (Tuesday); but at my second visit (Wednesday) I found that he had suddenly become much worse, and that his strength was rapidly giving way. Without further delay I opened out the inguinal canal, and found the remains of the old hernial sac filled with creamy pus, and forming a soft swelling of the size of a little finger. This did not communicate with the peritoneum. Following this tube to the internal ring I reached the cavity of the abdomen, and found the intestines glued by recent inflammation to the internal ring. Having broken down the adhesions, I passed the finger outwards between the intestines and the abdominal wall, and suddenly gave vent to about an ounce of discoloured offensive pus, and found that this abscess communicated with the cæcum by a ragged opening that would admit the finger. A small quantity of flatus escaped, but not sufficient to give effective relief. To maintain a passage for the flatus, an india-rubber tube was passed along the wound into the interior of the bowel. The patient was too much exhausted to benefit by the operation, and sank shortly after I left the house.

It is clear that if I had operated at my first visit, the operation might have saved the patient's life, as in the

similar case reported by Mr. Hancock;* and, looking back, I feel that the severity of the early symptoms would have justified such a course. My decision in favour of delay was, perhaps, too much influenced by my unwillingness to interfere as long as there appeared to be even a remote chance of spontaneous resolution of the obstruction.

Leeds.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

CASE OF EXOPHTHALMIC GOITRE ASSOCIATED WITH DIABETES.

(Under the care of Dr. WILKS.)

IN the St. Bartholomew's Hospital Reports for 1874, at page 255, will be found the notes of a case of exophthalmic goitre associated with diabetes, and remarks thereon by Dr. Brunton. For the notes of the following case we are indebted to Mr. Alfred Finch.

A. B., aged forty-four, married, and had three children, was admitted Jan. 28th. She had been subject to bilious attacks and to palpitation all her life, but had enjoyed moderate health till twelve years ago, when her friends noticed that the right eye was rather prominent. Shortly after this the left eye became prominent also, but the thyroid body did not enlarge until several months after. She then attended at the Ophthalmic Hospital, and subsequently was under the care of Mr. Bader. About twelve months after the eyes began to protrude the cornea of the right eye ulcerated, and was operated on at the Ophthalmic Hospital, but the sight of the eye was lost. The thyroid body was never larger than a duck's egg, and had not caused much inconvenience. For three years she had been getting thinner, and about six months ago she began to suffer thirst and to pass large quantities of urine, varying from 16 to 18 pints a day. On examination sugar was found in the urine. All her life she had been a great drinker of highly-sweetened tea. For the last three months she had been subject to various delusions, mostly of a suspicious character; and her temper had been very excitable. Since the commencement of the diabetes the thyroid body had returned to its normal size. The patient had not been dieted, but had been treated with opium and bark.

On admission, the patient was greatly emaciated. The skin was dry and rough; appetite not voracious, but she had a craving for food, especially for sweet things; thirst moderate; bowels very costive; conjunctivæ much congested and eyes very prominent; right cornea destroyed. On examining the left eye with the ophthalmoscope, the inner half of the optic disc in the inverted image was anæmic as compared with the outer half, and the outer margin was a little indistinct. The whole disc appeared to be bulging forwards. The urine was of a pale-straw colour, had a peculiar faint smell, and was strongly acid; there was no albumen; sp. gr. 1036; sugar 4 grs. per ounce; there was a deposit of uric acid and oxalate of lime crystals. The heart's impulse was very diffused; apex beat not definable; no cardiac dulness; the first sound varied—sometimes it was clear and sharp, like the normal second sound, intermittent and without bruit, at other times it was loud but followed by a distinct rough bruit; the second sound was normal. Pulse 84, intermittent at times. The resonance of the chest was good all over, and there were no morbid breath-sounds. Liver normal.

The patient was ordered to take three times a day a pill containing half a grain of codeia and three grains of extract of aloes, also a mixture containing sulphate and carbonate of magnesia with peppermint-water. The diet to consist of meat, greens, bran biscuits, butter, toast-and-water, and four ounces of brandy.

Jan. 30th: Urine, 3 pints 15 oz.; sp. gr. 1032; 4 grs. of sugar per oz. The patient has been very excited in the night; quiet and rational to-day.—Feb. 1st: Urine, 1 pint 14 oz.; sp. gr. 1020; 4·36 grs. of sugar per oz.—2nd: 4 pints 6 oz; sp. gr. 1020; 5·85 grs.—3rd: 2 pints 12 oz.; sp. gr. 1026; 13·33 grs. Still very excited and under the influence of delusions; no cardiac bruit heard since admission; bowels not open. Ordered castor-oil enema.—4th: Urine, 1 pint 10 oz.; sp. gr. 1032; 15 grs. of sugar per oz. Had a subcutaneous injection of hydrochlorate of morphia last night. Repeat injection.—5th: Urine, 1 pint 2 oz.; sp. gr. 1032; 16·5 grs. of sugar per oz.—6th: 10 oz.; sp. gr. 1026; 13·13 grs.—7th: Gets up daily; much improved mentally; bowels thoroughly open.—9th: Urine, 2 pints 5 oz.; sp. gr. 1017; 3·75 grs. of sugar per oz.—10th: 1 pint 10 oz.—12th: sp. gr. 1032; 24 grs.—15th: 2 pints; sp. gr. 1019; 10·90 grs.—17th: Sp. gr. 1026; 7·16 grs. Perfectly recovered from her delusions, and greatly improved in strength.

MIDDLESEX HOSPITAL.

CASES OF COXITIS TREATED BY EXCISION.

(Under the care of Mr. HULKE.)

THE following is a continuation from page 334 of the series of cases commenced at page 268.

CASE 9.—J. O——, aged eleven, an emaciated, pale, weak boy, was admitted into Percy ward with coxitis on February 27th, 1872. His right thigh and leg were very wasted, and the thigh flexed on the trunk at an angle of about 113°. When the pelvis was securely fixed, a slight mobility of the thigh-bone in the hip was discoverable; but, unless it was fixed, the pelvis was always twisted with the thigh. The patient referred his pain exclusively to the knee. Four inches below the anterior superior iliac spine was an open sinus. His abdomen was large; there was no enlargement of the liver; urine turbid, cleared by the addition of nitric acid.

He was placed on a firm, level mattress; an extension splint was put on, and an ice-bag laid against the hip. This treatment was followed by considerable improvement. On Nov. 13th the pain in the knee had nearly gone; the limb was much straighter, and the discharge had become much less.

He continued to improve for several weeks, but in the spring his strength declined, and on April 24th the head of the thigh-bone with the neck and trochanter major were excised through a curved incision. The head had lost its cartilage and was carious. Although little force was applied to tilt the end of the bone out of the socket by grasping the shaft just above the knee, the shaft snapped across within the band. Short splints were immediately applied about the fracture, the bone cut through *in situ* below the trochanter, after which the remains of the head were seized with a lion forceps and dissected out. A strong adventitious band joining the head and the acetabulum formed the impediment. All the acetabular cartilage had disappeared, and the upper and posterior margin had undergone an upward and backward prolongation. The wound was dressed and the limb put up in the usual manner. In the course of the afternoon there was slight bleeding, but not enough to demand the opening of the wound. It soon ceased. He vomited several times through the afternoon and night (from chloroform?), and he rallied slowly from the shock. On May 2nd he had a rigor, with high temperature and retching. On the 5th he wandered at 4 o'clock A.M. He became convulsed, and died at 9 o'clock A.M., eleven days after the operation. His mother forbad any post-mortem examination of his body.

CASE 10.—E. R——, aged eight, who had been in the Middlesex Hospital during five months in the preceding spring and summer with coxitis, was readmitted into Queen ward Oct. 8th, 1866. Her condition at this time was thus described:—"She is lying on her left side with her pelvis very twisted, and her right thigh flexed and adducted, so

* Druitt's Vade Mecum (p. 104):—"In an apparently desperate case of acute inflammatory disease of the appendix cæci arising from impaction of fæculent matter, Mr. Hancock made an incision close above Poupart's ligament into the abdominal cavity, and gave issue to some offensive serum, to the great relief of the patient, who recovered. He proposes a similar operation for the purpose of letting acrid effusions drain away in cases of unhealthy peritonitis, and the hint is a valuable one."

that the great-toe of this leg crosses the left ankle. The right buttock is much flattened. Behind the great trochanter are two sinuses, which discharge copiously. The apparent shortening is nearly three inches, of which the actual shortening does not amount to more than one-third." After a month devoted to a fresh trial of rest, during which the joint was fixed, it became evident that her condition deteriorated, and excision was her only chance. It was therefore done on the 8th November, the head, with the neck and greater trochanter of the thigh-bone, being removed through the usual curved incision. The acetabulum had lost its articular cartilage, and in some parts seemed to be carious. These softened suppurating spots were gouged out. The wound was washed out with a solution of chloride of zinc, twenty grains to an ounce, and closed with sutures, except at one point, through which a caoutchouc drainage-tube was inserted, the other end of which was brought out through a counter opening made in a large inter-muscular abscess, which was found running down the thigh. The limb was fixed in the customary manner with a De Morgan's splint and sandbags. She had a firm, thick, horsehair mattress placed upon a continuous flat board, and a water pillow was put beneath her breech.

On the third day she was cheerful, playing with her doll, and had slept well. On the nineteenth day one of the inguinal lymphatic glands was swollen and tender, and two days later an abscess pointed near the anterior superior iliac spine. It was opened, and a large quantity of very fetid pus was let out. On 14th December this abscess, the lower of the two sinuses in the thigh, and the greatest part of the wound had closed, and there was but little discharge. On the 22nd March, 1867, passive movements and pressing the end of the bone into the acetabulum gave no pain. Two small unhealed spots in the wound and two of the sinuses furnished a few drops of pus daily. She was quite easy, and had gained flesh. Early in May she was allowed to go into the garden with crutches, wearing a spica bandage stiffened with glue, and at the end of the month she went home.

March 20th, 1868.—After nearly a year her mother brought her to see Mr. Hulke. The girl had grown stouter, stronger, and taller. She still wore a stiffened bandage for support. In-doors she ran about the house without any artificial aid, but out-of-doors she still used a crutch, which, however, it was thought she would scarcely need if she had a suitable boot. The old sinuses had closed, and the wound had healed except at its centre, where a very small, apparently superficial sore sometimes yielded a drop of pus; it was then dry. She had a very fair amount of movement in the false joint.

In the early autumn of the same year (1868) she continued well. The right leg at this time was one inch and a half shorter than the left.

RADCLIFFE INFIRMARY, OXFORD.

CASE OF UNILATERAL CONVULSION IN A CHILD, SHOWING THE VALUE OF CHLORAL HYDRATE AS A REMEDY.

(Under the care of Dr. ACLAND.)

FOR the notes of the following interesting case, and the appended remarks, we are indebted to Dr. C. A. Rayne.

E. W——, a boy aged five, was admitted Sept. 2nd, 1874, suffering from convulsive seizures, sometimes as often as twenty in twenty-four hours. Three weeks before he was struck by a stone on the back of the head, and two or three days afterwards the fits first appeared.

On examination, a scar was detected close to the occiput, half an inch to the left of the middle line. It was stated that the boy's father had suffered from fits when about the same age. In the fit, as observed the day after admission, the head and eyeballs were turned to the right, and remained there, fixed, rigid, and motionless, the pupils being slightly but equally dilated. The right arm was rigidly extended, with a slight tremulous motion; the rest of the body unaffected. Consciousness appeared to be quite lost. The fit lasted about one minute, and recovery was rapid, almost abrupt, and complete, there being at this time no after-drowsiness. The patient's appearance and habits were lively and intelligent, and his general health good. In the intervals between the fits there was nothing abnormal noticed. There being reason to suspect the presence of worms, a dose of santonin and castor oil was administered.

Sept. 4th.—Three large lumbricoid worms have been passed; the fits are much less numerous, and chiefly occur in the early morning. The vermifuge to be continued.

7th.—No more worms have been observed; the fits still continue, to the number of three or four in the day. Ordered three grains of bromide of potassium thrice daily.

14th.—No further improvement. The bromide continued in five-grain doses, and the nape of the neck painted with iodine liniment.

18th.—Fits increasing in number and severity. Ordered the bromide in ten-grain doses every four hours.

25th.—Condition becoming worse; fits are now as many as twenty in the twenty-four hours, occurring chiefly in the day-time, and necessitating confinement to bed. In the intervals the right side is distinctly weakened, and the boy walks with a falter of the right leg, frequently stumbling. He is still lively and intelligent in his actions, but has gradually ceased to talk. He does not answer inquiries, and is probably aphasic. He constantly cries to be allowed to get out of bed, and immediately his feet touch the ground he sets off running, apparently not caring where he goes, for he will run against a wall or into the fire. The special senses are not, however, affected, so far as can be discovered, nor does he appear to be in any pain, but the general health is rapidly deteriorating. Ordered tincture of belladonna in five-minim doses every four hours.

Oct. 3rd.—No improvement. The commencement, progress, and duration of each fit are again carefully observed. The onset is quite sudden, and attended with a faint cry; if standing, he falls to the ground; in bed, sitting up (his usual position now), he falls backwards, and apparently at once loses consciousness. The features are now blanched, and twitching commences in the frontalis muscle on both sides, the right angle of the month speedily taking up the action. The head and eyeballs, as before, are drawn to the right, and the latter are twitched repeatedly in this direction, the internal rectus of the left and the external rectus of the right eyeball being apparently affected with clonic spasm. The mouth is drawn to the right; there is rigidity of the right arm, with tremulous motion; conjunctivæ insensible; pupils equal and large. Duration of fit about one minute, after which patient now falls asleep for a quarter of an hour. In one fit it was observed that the head was at first directed to the left, but speedily took up its accustomed position. In all the affected muscles the spasm is acquiring more of a clonic character than at first; they are affected also with a certain amount of temporary paralysis after each fit. Ordered iodide of potassium in five-grain doses every four hours.

10th.—No improvement. Ten grains of the iodide are now given thrice daily.

20th.—The fits now number twenty to thirty in the day, and are more severe. The right side of the face has acquired a blank and expressionless aspect. The general health has suffered considerably, and patient looks pallid and thin; his appetite, however, is good. He is still lively and mischievous, but does not talk. He frequently exhibits vicious tendencies towards his neighbours, such as trying to bite them; and is very dirty in his habits, apparently wilfully. Ordered seven and a half grains of chloral every night.

22nd.—Fits now reduced to about fourteen in the day. Ordered ten grains of chloral thrice daily.

25th.—The fits are now much fewer in number and less severe; seven yesterday, and only two to-day; very slight, and no after-drowsiness.

Nov. 4th.—No fit since the 30th ult. Patient cleaner in his habits.

10th.—There has been no fit. Patient gets up now, and is very vivacious and troublesome, running about in a haphazard kind of way, and not unfrequently coming to grief. He looks out of health; the face has lost its intelligent aspect, and appears asymmetrical and ill-developed on the right side. The right side of the body appears weaker than the left. He makes no attempt to talk. Ordered to take the chloral now only at night in ten-grain doses, and a teaspoonful of cod-liver oil twice in the day.

20th.—No return of the fits. Great improvement in general health and intelligence. Ordered to omit all medicine except the cod-liver oil.

Dec. 2nd.—Patient has now recovered his usual health, and is discharged. He is, however, unable to talk.

A month later his mother wrote to say that he had had no relapse, that his health was good, and he was commencing to talk again.

Remarks.—The muscular phenomena in this case correspond very accurately with those which would be occasioned, according to Prof. Ferrier, by disease or injury affecting some of the left frontal and parietal convolutions.* Thus, he states that the *hand and arm centres* are localised in the ascending parietal and upper divisions of the ascending frontal convolutions; that the posterior divisions of the superior and middle frontal convolutions contain an area, stimulation of which causes *the head and eyes to be directed to the opposite side, and the pupils to dilate*; and that the *facial muscles and muscles of articulation* have their centres in the ascending frontal, in regions corresponding to the posterior extremities of the middle and inferior convolutions respectively. Though there was no opportunity of determining the precise seat of lesion in this case, it is extremely interesting and corroborative of these views to note that not only are all these parts in immediate relation to each other, but also that if we suppose a centre of disturbance to commence at the lower part of the ascending frontal convolution, and to spread over part or the whole of the ascending parietal and the superior, middle, and inferior frontal convolutions, we should have the succession of muscular phenomena *in the order in which they did actually occur*. It is worthy of note also—whatever may be the ultimate significance of the fact—that a large artery, a branch of the middle cerebral, runs along the anterior division of the Sylvian fissure, furnishing numerous lateral offsets to the parts in question. Any disturbance of this artery through its sympathetic nerve-supply, and extending to its branches, would probably affect these nerve-centres in the same order.

It remains a difficulty to understand why the occipital injury (if this was really the origin of the mischief) should have specially affected these particular convolutions. It is tolerably certain from the result that the real organic injury was slight, though its effects functionally were grave. Probably the chloral hydrate acted so magically merely by quieting the irritable nerve-centres, until they had had time to recover from the "bad habit" which they had acquired. It is instructive to note that this irritability, though *intrinsic* in the first instance, was capable of being greatly increased by *extrinsic* causes (worms in this case), and that it underwent great diminution for a time on the removal of these.

* Memoir on the Localisation of the Functions of the Brain. Presented to the Royal Society.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE ordinary meeting of this Society was held on Tuesday, the 9th inst., Sir James Paget, Bart., in the chair.

The meeting was occupied by a paper by Dr. WILLIAM M. ORD "On Urinary Crystals and Calculi; being observations on some of the circumstances determining the form of crystalline deposits in the urine, and on some of the conditions under which renal and vesical calculi are produced." The paper was a *résumé* of some of the investigations on which the author has been for some time engaged on the influence of colloids on the variations in crystalline form, and especially of experiments made with the object of producing synthetically under determined conditions the various crystalline forms observed clinically in urinary deposits. Some of these researches have recently been published in the Journal of the Royal Microscopical Society. The paper, which was of some length, was illustrated by numerous diagrams showing the variations in the crystalline form of urinary deposits seen under various conditions of the urine.

The author first reminded the Society of the difference between the crystalline form of pure uric acid and that of uric acid as observed in urine, the former occurring in oblong rectangular tablets, approaching to the square form, and of a thickness about one-sixth of their length, the latter usually in rhombohedra with rounded obtuse angles; the former is found in separate crystals, the latter very frequently in zeolitic masses. After a brief reference to previously published observations of the author showing that uric acid deposited in the presence of albumen or other colloids tended to sphericity, whilst in the presence of sugar and other crystalloids it is angular and mostly tabular, a series of experiments, made with the object of determining the causes of the altered forms of urinary uric acid, were related. These consisted for the most part in crystallising uric acid from saturated solutions in the presence of the principal organic and saline constituents of the urine in succession. The conclusions drawn from these experiments, which were very extensive and varied, was that mucus and the colouring matter of the urine are both agents in the production of the forms of uric acid ordinarily met with in the urine; that either agent is capable of exerting this influence without the presence of the other, and that these are probably the sole agents in ordinary urine.

The next series of observations referred to the forms of uric acid in *albuminous* urine. It was remarked that whilst they tend generally to sphericity, they vary much in the degree of their tendency; and from a series of observations, the results of which were given, the author inferred that a larger proportionate quantity of urea in albuminous urine constitutes an obstacle to the sphere-forming process in proportion to the amount; even a very small quantity exerting a considerable influence. The author stated that he had been unable to arrive as yet at any definite conclusions as to differences in the influence of other albumens on the form of the crystals. In *saccharine* urine two forms of uric acid crystals were noted as occurring, one a flat rhombohedron with chiselled ends, the other a six-sided tablet with sharp ends, the latter being a form of rare occurrence. *Purulent mucus* in urine appeared to possess a great power of converting uric acid to a spherical form, and of causing the aggregation of spheres into calculi. The author referred to the observations of Dr. Vandyke Carter on the structure of calculi, and argued that the experiments related agreed from a synthetic point of view with his analyses. He inferred that the influence of colloids, and particularly of mucus, in favouring the formation of calculi within the urinary passages, was of the greatest importance, and worthy of especial notice in its bearings upon practice. Catarrh of the pelvis of the kidney or bladder, or other conditions sending colloids into the urine, might thus be the determining cause in the production of stone. He believed that uric acid and other crystalline substances do not of themselves tend to form calculi, but are moulded by the other constituents of the urine. Although its influence had not been exactly measured, a higher temperature was shown to be active in promoting the formation of spheres, and the author attributed great importance to this point.

The forms of urates and the influence of chlorides, albumen, and mucus upon them, were next noticed. The formation of spheres was found to be favoured by the presence of mucus in a high degree, and in a less degree by that of albumen. Concentration of the urine and detention in the urinary passages were noted as important coefficients. This especially applied to the spherical form of urate of soda observed by Golding Bird, Thudichum, Beale, Roberts, and others.

The formation of dumb bells of oxalate of lime under the influence of colloids was next referred to, and several cases of spheroidal modification of oxalate of lime in urine containing colloids were brought forward, especially one in which both spheroidal form and the ordinary octahedron were passed at the same time, the urine containing albumen. With regard to triple phosphates, they appeared to be much less easily moulded by colloids than the other substances mentioned, but it was shown that mucus, aided by a warm temperature, can and does modify triple phosphates towards sphericity, and favours calculous deposits. The forms obtained under such conditions were found to agree in a

remarkable manner with the forms of triple phosphates found by Dr. Vandyke Carter in calculi. Finally, the author noted the influence of the presence of albumen on the form of nitrate of urea when precipitated by nitric acid in albuminous urine of high specific gravity. The paper concluded with an eloquent summary of the bearings of the observations on micro-morphology, and urged that in the microscopy of the future we shall not be content with merely observing and recording the forms of tissues, but shall go on to interpret the meanings of those forms, and by following out the relations of form and substance, and compelling form to tell the story of growth and function, we shall be enabled to proceed to the discovery of the laws of tissue formation.

After a vote of thanks to the author, the discussion was commenced by Mr. BROOKE, who inquired whether one of the figures of oxalate of lime crystallised in the presence of mucus, which was of pentagonal form, represented accurately anything seen, as, if so, it appeared at variance with all the known laws of molecular aggregation, the crystalline form of oxalate of lime being the octahedron.—Dr. ORD replied that the drawing was a faithful one, probably representing the centre and sides of an octahedron approaching the spheroidal form. The crystal was probably not five-sided, but was altered in appearance by the acquired curves of the surface.—Dr. DICKINSON referred to the statement that uric acid formed the most common nucleus of urinary calculi rather than oxalate of lime. This statement, although agreeing with that in books, did not accord with his experience. From an examination of the descriptions of the calculi in nearly all the museums in London, he believed that oxalate of lime was by far the most important. And from the fact that urinary calculi chiefly occurred in districts where limestone abounds, and the water is very hard from containing much lime salts, it was probable that the formation of calculi depends usually on the chemical condition of the urine rather than on inflammatory conditions of the urinary passages or vesical catarrh, to which Dr. Ord's observations would ascribe so much importance.—Mr. THOMAS TAYLOR thought that Dr. Ord's observations were only applications of the general laws governing crystallisation. He regretted that a more definite term than "mucus" had not been employed to specify the blastema or organic substance of calculi. He referred at some length to his investigations on the structure of calculi made when examining the concretions of the College of Surgeons' museum, and mentioned the difficulty met with in endeavouring to free the organic basis from the earthy matter without destroying the former. When he succeeded with a concretion from the sturgeon's bladder, he was quite unable, after many attempts, to determine the precise nature of the animal matter. He described also in some detail the views he held on the mode of formation of urinary calculi. He believed the uric acid was secreted in a hydrated condition, and then became coated with animal matter, probably resembling coagulable lymph or albuminoid exudation, and, thus coated, escaped into the bladder and laid the foundation of a calculus. This exudation was probably due to irritation of the pelvis of the kidney. He believed that the question could be more readily settled by the anatomist than the chemist.—Mr. SAVORY remarked that the paper was additional evidence of the influence of viscidity on the form of crystals, which had been demonstrated in such a complete manner many years ago by Mr. Rainey, who showed that by altering the amount of viscidity the crystalline form could be modified towards the sphere in any desired degree. He paid a high tribute to the observations of Mr. Rainey, which had been almost entirely ignored on the Continent.—Dr. BROADBENT remarked on the value of the paper, and pointed out that no animal basis was needed to connect the crystals.—Dr. ORD, in reply to Dr. Dickinson, pointed out that he had avoided the question of the nucleus of calculi, referring only to their main ingredients. The alteration of the oxalate of lime from its normal octahedral shape could only be accounted for by the presence of a colloid, as illustrated by the experiment of crystallising it in gelatine. With reference to Mr. Taylor's difficulty in regarding the organic basis of calculi as mucin, he pointed out that it need not present the same reactions as before, for Harting had shown that the colloid material may change in its reactions, and give those of chitin after being in calculi. Dr. Ord believed that in nearly all calculi some of the colloid remains were retained in them. He fully agreed with Mr. Savory as to the value of Mr. Rainey's observations, from which, in fact, he had drawn much of the inspiration for his own work, and to whom he owed a great debt of gratitude.

MEDICAL SOCIETY OF LONDON.

AT the meeting of this Society on March 1st, Mr. de Méric, President, in the chair, Dr. FARQUHARSON read a most interesting case of Unusually Rapid Action of the Heart, which had occurred in his practice in the Coldstream Guards. It was that of a man with aortic valvular disease, who came under medical care for palpitation. After twenty-five days' treatment by digitalis, he was suddenly seized with most violent and rapid action of the heart, the pulse being 216, the breathing hurried, and the countenance pale and bedewed with sweat. Whilst Dr. Farquharson had his hand on the wrist, two hours and a half after the beginning of the attack, the heart suddenly stopped, gave several irregular beats, and, on resuming, the pulsations were found to have fallen to 104. The man was shortly after invalided the service. The author referred to cases recorded by Dr. Cotton and others, and more especially to one which had been communicated by Dr. Willett, and in which very rapid action of the heart came on after sudden emotional shock. In considering the cause of the symptoms, Dr. Farquharson was inclined to agree with Dr. Handfield Jones in ascribing them to an exhausted condition of the vagi, leading to suspension of their inhibitory power. This is borne out by the effects of various weakening agents on the heart, and also by therapeutical research, which shows that atropine causes an excessively rapid rate of the heart by paralysing the pneumogastric inhibitory filaments within its muscular structure. Tonic and stimulating treatment, with digitalis, seemed to answer well in most cases. In Dr. Farquharson's case the patient was fully under the influence of digitalis at the time of the attack, which may be ascribed to the property this drug has of primarily stimulating and secondarily exhausting the vagi, and thus enabling the sympathetic nerves to act unrestrained, and so to increase the rapidity of cardiac pulsation.—The PRESIDENT thanked Dr. Farquharson for his communication, and said he was glad to hear a military surgeon bring forward a record of his regimental duties.—Dr. BROADBENT had no explanation to offer concerning the cause of this unusually rapid action of the heart, beyond that given by the author of the paper; he then proceeded to give slight sketches of four cases of this kind which he himself had seen. In some instances he thought there was risk in giving digitalis, and preferred small doses of belladonna combined with ether and ammonia.—Dr. FOTHERGILL considered it very difficult to find an explanation of these cases; he remarked that irritation of the pneumogastric produces delay of the heart, whilst if the nerve be paralysed rapid action ensues.—Dr. LEARED was of opinion that dyspepsia and distension of the stomach from flatus often produces palpitation. He gives digitalis and strychnia, or nux vomica. He mentioned a case of a patient who had palpitation every time the bladder was emptied, and also one of epilepsy in which there was very rapid action of the heart for two or three hours during unconsciousness. He thought it was difficult to count accurately a very rapid pulse.—Dr. BRUNTON had only seen one case of this kind, which had occurred in a woman threatened with puerperal fever. The pulse ran up to 180, and was very difficult to count, but under the influence of digitalis and perchloride of iron it came down to 84. He divided these cases into two classes, arising (1) from structural and (2) from functional disorder.—The PRESIDENT then asked the state of the lungs and of the temperature in these cases, and Dr. BROADBENT stated that in those he had seen there was slight nervous dyspnœa, and the temperature was only just above normal.—Dr. FARQUHARSON responded.

Dr. ALFRED CARPENTER then read a paper "On the Rational Treatment of certain forms of Hemiplegia." After a few general remarks concerning the natural history of the

disease, he detailed a typical case. In the course of the preceding twenty years he had met with ten in which perfect recovery had taken place without leaving any evidence of serious evil. The cases in question had all occurred in men in the prime of life, the attack having been preceded by malaise and inability to do ordinary work, followed by a sudden attack of giddiness, faintness, partial or total loss of consciousness, which lasted for a time, then departed, leaving the patient weak, hemiplegia gradually supervening. At the end of two or three years, under the treatment prescribed, the whole of the ten cases had completely recovered, no sign being left of that cerebral disease which has been confidently asserted to be present in some cases. The author then considered the probable pathology of the disease, and likened it to a condition which constitutes a kind of thrombosis in atonic gout in which plugging of the capillaries appears to take place, œdema following, then resolution. And from a consideration of the pathology he reasoned out the treatment to be pursued. 1. To prevent rupture of the cerebral vessels by taking off pressure from within by acting on the various excretory organs, keeping the patient's body warm, and providing him with a pure atmosphere. 2. Giving the stomach as little to do as possible, taking care to provide plenty of diluting liquid. 3. Providing muscular exercise by the aid of an attendant, on the theory that if the muscles were manipulated as proposed, the number of respirations were increased per minute, though the patient does not move from his chair, and thus carbonic acid was more freely excreted, and the débris, the result of living, more easily got rid of. 4. Making the patient, who has always a superabundance of fatty matter in his blood, live on that fat, and prevent as far as possible the introduction of azotised food, interdicting therefore beef, pork, veal, pastry, much sugar and rich-made dishes, all partially fermented wine and beer and spirits. 5. Insisting on a fish diet at least once a day, with milk and simple food. The author laid great stress on the advantage of fish to these patients; he gave it as his opinion that the Friday fish dinner enjoyed by the Roman Catholic Church had helped to save many a hard brain-worker from a break down, and urged, in conclusion, that fish contained the ingredients to assist in the reparation of brain-waste more than any other food, and quoted Agassiz, the Swiss naturalist, in support of his views.—The PRESIDENT thought the paper quite a model one, and considered the treatment advocated to be of great advantage.—Dr. BROADBENT could not speak too highly of the paper, as everyone must learn something from it; for his own part, however, he would have liked to have had the details of Dr. Carpenter's cases. Whilst endorsing all he had heard, he was inclined, however, to give milk, and considered it as efficacious as fish. He had once met with an undoubted case of serous apoplexy, in which no lesions whatever could be found at the autopsy; serous apoplexy he considered to be the result of capillary embolism. He thought Dr. Carpenter's treatment well calculated to bring about recovery where there was a clot. He asked if sensation was lost to a considerable degree, and how long coma lasted in any of these cases that recovered.—Dr. LEARED doubted if there were any such thing as serous apoplexy; he asked if in any of Dr. Carpenter's cases there was suspicion of syphilitic disease of the brain.—Dr. MILNER FOTHERGILL thought that the cerebral condition in these cases might be rather that of spasm with effusion of lymph into the perivascular spaces. He agreed with the author entirely as to the treatment, and considered the observations of Parkes as to the effect of a non-nitrogenised diet upon the circulation to be of great value.—Dr. BOYD remarked that recovery from hemiplegia was very common in Marylebone workhouse, and agreed with Dr. Carpenter with regard to the diet to be recommended.—Dr. CARPENTER replied.

Mr. DE MÉRIC made a few farewell remarks to the fellows of the Society, regretting it was the last time he should occupy the chair, and hoping that, as far as his health had allowed him, he had satisfactorily performed his duties as president.

The following gentlemen were elected officers for the ensuing year:—President: Dr. Routh. Vice-presidents: Dr. Broadbent, Mr. Royes Bell, Dr. Pavy, and Mr. Maunder. Treasurer: Mr. John Gay. Librarian: Dr. Thorowgood. Secretaries in Ordinary: Dr. C. Theo. Williams and Mr. Richard Davy. Secretary for Foreign Correspondence: Dr. Cholmeley. Orator: Mr. Erasmus Wilson. Council: Rev. David Bell (Goole), M.D., Mr. Woodhouse Braine, Dr. Brunton, Mr. Bryant, Mr. Brudenell Carter, Sir Henry Cooper, M.D. (Hull), Dr. Farquharson, Dr. Fayrer, Mr. Gant, Dr. Clement Godson, Mr. John Hainworth, Mr. T. Harvey Hill, Mr. MacCormac, Mr. de Méric, Mr. W. D. Napier, Dr. J. H. Paul, Dr. Russell Reynolds, Dr. Sansom, Dr. Sedgwick, and Dr. Wiltshire.

HOSPITALS FOR ALL CLASSES.

To the Editor of THE LANCET.

SIR,—That hospitals are only for one class is an insular prejudice. Many years ago the present registrar to the Admiralty, being on a mission to French Guiana on slave trade business, fell sick of fever. He was advised to go into hospital, where a healthy, airy room, with the best medical skill and nursing the colony could afford, soon enabled him to return to work. When the General Hospital at Madras was rebuilt, pleasant apartments overlooking the river were reserved for military officers and others waiting to embark for England for the restoration of their health. These examples followed the general practice of the continent of Europe, and why should it not be naturalised among us? What a relief it would often be, even to a well-to-do family, if a sick member could be nursed at a neighbouring hospital, and how many unmarried ladies and gentlemen would obtain in this way advantages which their own homes could not afford. To set apart rooms in existing hospitals seems better, at any rate at first, than to construct a new hospital entirely for this purpose, as proposed in the last number of THE LANCET. Full payment must of course be made, but this would be moderate compared with the services rendered. The indirect benefit to the hospitals, by making them popular, and calling attention to the details of their management, would also be very great.

The practice in the United States will be seen from the following interesting extract from Sir Fowell Buxton's journal of his recent tour:—"Boston, November 24th, 1874: In the afternoon I went with Dr. Clarke to see the Massachusetts Hospital, which has nothing particular about it except this, that it charges those who are able to pay. It has four classes of patients. 1st. Free beds, but not many. 2nd. Beds free in general, but on which certain persons who have given moneys have a claim for their friends. 3rd. The beds constituting the great majority, for which a charge is made of a dollar a day, but part or all is sometimes remitted at the discretion of the governor, who is one of the acting medical officers. No difference is made in the privileges of these three classes, nor any asked for by the patients. 4th. Some private rooms, at five or six dollars a day, where I shall go if necessity requires it. Let —— see this, not that I expect the London Hospital to adopt it. At all events bankruptcy will come first." Thus it appears that, with special exceptions, all pay who cannot prove their inability to do so, and that paying and non-paying patients occupy adjoining beds without any idea of their receiving unequal attention. Sir Fowell Buxton's allusion to the prejudice which induces us to submit to a chronic state of bankruptcy for most of our medical institutions, and to train our working population to dependence upon alms, rather than receive from them such payments as they are able to make, might be expanded into a book.

I am, Sir, yours, &c.,

London, March 9th, 1875. C. E. TREVELYAN.

PROF. GAIRDNER delivered an address before the Glasgow University Medical Society last week on the subject of Examinations. He strongly urged the desirability of a more practical system of examination than that which now obtains. While dissenting from the doctrine that teachers should not be examiners, he had no desire to see them the sole examiners, and gave his hearty sympathy to the efforts which the universities are now making for securing an increase in the number of non-professorial examiners. Dr. Gairdner contended that every lecturer ought to have his practical department, where he would direct and associate with the students in the work of personal observation.

THE LANCET.

LONDON: SATURDAY, MARCH 13, 1875.

THE Bill for Consolidating and Amending the Acts relating to Public Health in England, introduced into the House of Commons by Mr. SCLATER-BOOTH and Mr. CLARE READ on the 11th of February, has now been made public. It consists of 333 sections and sundry schedules, occupying 156 folio pages, and is a much less formidable document than might have been looked for, considering the mass of matter and the numerous Acts which have to be dealt with. It is less bulky, indeed, than Sir CHARLES ADDERLEY'S Bill which was brought before the House of Commons in 1871, and which consisted of 452 sections and certain schedules, occupying 183 folio pages. The Bill does not extend to Scotland or Ireland, nor (except as provided) to the metropolis. It is divided into eleven principal parts, each of which is devoted to a particular subject. The first part, which is preliminary, gives the title of the proposed Act ("The Public Health Act, 1875"), recites the arrangement, and states the definitions of particular terms used. The second part relates to Authorities for Execution of the Act; the third to Sanitary Provisions; the fourth to Local Government Provisions; the fifth to General Provisions; the sixth to Rating and Borrowing Powers and the Expenses of Sanitary (in this Bill designated Local) Authorities; the seventh to Legal Proceedings; the eighth to Alteration of Areas and Union of Districts; the ninth to the Local Government Board; the tenth to Miscellaneous and Temporary Provisions; and the eleventh to Saving Clauses and Repeal of Acts.

The different provisions of the several Sanitary Acts relating to the various subjects of these divisions are all brought together under their respective heads, with an enormous gain of comprehensibility and consistency. The preliminary simplification of the Sanitary Acts which had been executed by the Legal Department of the Local Government Board in the excellent Digest of the Sanitary Laws which it had prepared, has here been carried a step further; and the Bill, with regard to its clear and comprehensive arrangement, appears to leave little to desire as a work of consolidation.

The part of the Bill which most concerns the profession is that which relates to Sanitary Provisions, and to this part, and to certain amendments introduced into the Bill, we propose for the present to confine our observations.

The different sanitary provisions of the law are arranged in various divisions and subdivisions. First come the provisions relating to sewage and drainage, arranged under the different headings—regulations as to sewers and drains, the disposal of sewage, and sewerage works outside a district. Next, the provisions relating to privies and waterclosets are dealt with; and after these come the provisions as to scavenging and cleansing, arranged under the two subdivisions of regulations as to streets and houses, and provisions as to offensive ditches and collections of matter. Then come the provisions as to water-supply—first, with reference to the powers of the local authority in relation to water-supply, and next with reference to the protection of water. The provisions as to the regulation of cellar dwellings and lodging-houses follow, arranged under the several headings—occupation of cellar dwellings, common lodging-houses, and bye-laws as to other lodging-houses. Then are given, in their respective categories, the provisions as to nuisances, offensive trades, unsound meat, &c. Finally come the provisions as to infectious diseases and hospitals, the prevention of epidemic diseases, and mortuaries. This bare enumeration of the arrangement of the provisions of one part of the Bill will indicate the vast practical advantage to be gained by the consolidation proposed.

The amendments introduced are not noted in the Bill, and, so far as disclosed by the examination to which we have as yet submitted it, appear to be very few; but these are of considerable importance. The two following chiefly arrest attention. It is proposed (Sect. 57) that if it appears to a sanitary authority that any house within its district is without a proper supply of water, the authority may not only intervene if water can be supplied at a rate not exceeding twopence a week (as already provided by the law), but also in addition, "at such other rate as the Local Government Board may, on the application of the local authority, determine under all the circumstances of the case to be reasonable." Another important amendment relates to the union of districts for the appointment of medical officers of health. Sect. 278 provides that where it appears to the Local Government Board, "on any representation made to it," that the appointment of a medical officer of health for two or more districts situated in the same county would diminish expense, or otherwise be for the advantage of the districts, the Local Government Board may by order unite them for the purpose of appointing a medical officer of health, and may make regulations as to the mode of his appointment and removal by representatives of the authorities of the constituent districts, and the proportion in which the expenses of the appointment, and of the salary and expenses of such officer, are to be borne by such authorities, and as to any other matters (including the necessary expenses of such representatives) which in the opinion of the Board require regulating for the purposes of this section; and no other medical officer of health shall be appointed for any constituent district, except as an assistant to the officer appointed for united districts. The same section provides also that the Local Government Board may designate the Poor-law medical officer such an assistant. Mr. SCLATER-BOOTH referred to this proposition when he introduced the Bill, and we discussed it in THE LANCET of Feb. 20th. The provision simply, and upon the face of it, would enable the Local Government Board to endeavour to remedy the egregious blunders that it has committed with regard to the appointment of medical officers of health by over-riding that local self-government which it has hitherto ostentatiously paraded as the essential consideration of its sanitary administrative policy. There is nothing whatever in the Bill to show that this provision would not, as administered by the Local Government Board, lead to greater blunders than those already committed by

it. There is, indeed, much in the provision to indicate that it would not lead to efficiency of appointment, for the essential condition that the area of appointment shall be regulated by the duties to be performed is, as heretofore, dealt with as a mere casual matter, the question of expense (in a sense of which there has surely been sufficient experience) and of county limits being obviously regarded as of much more serious concern. If, as we have already had occasion to state, a provision of this kind be accepted by Parliament without having first being submitted to a Select Committee, we shall assuredly be launched into another and perhaps even worse stage of Gwydyr House sanitary muddle.

To those acquainted with the history of homœopathy for the last thirty years it may seem almost incredible that the fallacies of this system, which have suffered repeated exposure, should still have any hold on the minds of some of our fellow-creatures. But recent experience would appear to show that instead of being entirely eradicated homœopathy has actually assumed an air of respectability, and that instead of hiding its diminished head it now struts forth and arrogantly claims a place in medical science. When we consider the rebuffs it has met with at the hands of the best educated medical men in this country and abroad, and the reproaches cast upon it by the various examinational bodies and the medical societies, it is at first sight difficult to understand the present attitude of homœopathy. But if we look into the question more closely we shall find that after all there is, according to the confession of some recent writers, nothing which can now be called homœopathy. One by one the favourite doctrines of homœopathy have been relinquished till nothing but an empty name remains. The "doctrine of dynamisation" has been quite recently described "as being as unsatisfactory as the many other attempts to account for the action of small doses." The efficacy of infinitesimal doses is no longer accepted as an article of faith; in fact, "there is no point of homœopathic practice on which greater difference of opinion exists among practitioners than the dose of the drug required for curative purposes." The vaunted law of "*similia similibus curantur*" has been acknowledged to be no law at all. "There are," says a recent authority on homœopathy, "cases which do not admit of homœopathic treatment, and others where it is necessary to produce certain effects which cannot be obtained from either large or small doses of homœopathic remedies"; in fact, "there are many diseases in which the mere resemblance of the obvious symptoms caused by drugs to the obvious symptoms of the disease will not suffice to effect a cure." It is at last confessed that "homœopathy is not a complete system of medicine opposed to all medical science"; and yet the heart and soul of the system was that "in every case of disease to give a medicine whose positive action on the healthy human organism corresponds to the sum of the symptoms observable in the disease"; that "a drug, which in the healthy body in large doses will produce certain symptoms, will in small doses cure *similar* symptoms arising from disease." Even in practice the professed homœopath does not pretend to adhere strictly to his system. Not he. He tells us that "there is no law of science, ethics, or etiquette that prevents our administering any remedy we may think requisite," whether homœopathic in its action or not; nay, he will even go so far as to confess that he is perfectly willing to meet the whims and fancies of his patients, and to practise homœopathy or not according as he is desired. Such appears to be the state of homœopathy, its practice, and its practitioners, as given in a homœopathic publication for the present month. After this we may well ask what is homœopathy. We have regularly read the homœopathic publications for a long time past, and can safely affirm that there is not one of the homœopathic doctrines that has not been given up by one authority or another. Except the strange inconsistency of such confessions as the above, we have nothing to complain of. But let us now turn to the positive side of homœopathy, and see what it really is.

Two years ago, in an address to students, we characterised homœopathy as a system founded in deceit, built up in ignorance, and supported by credulity. This denunciation roused, as we expected it would, the indignation and the ire of the homœopathic writers, who for many months after occupied a large portion of their journals in calumniating what they call allopathy and allopathic practitioners. They even attempted to turn the point of the charges back upon us. Notwithstanding the protests of these gentlemen, the opinion we expressed at that time remains unaltered, and, in justifying the allegations we then made, we hope to show that homœopathy is a system that is not entitled to toleration, much less to confidence and respect. We speak now, of course, of unsophisticated homœopathy.

It is affirmed that about the commencement of the present century a man named HAHNEMANN, after suffering personal and pecuniary inconvenience from the inopportune exposure of a fraud which he had carried on for some time with considerable profit, determined to try his hand again in a somewhat different manner. When he was no longer able to sell at an enormously high price his famous nostrum called *Pnoeum*, but which was in reality simple borax, he determined to treat his patients in future without any medicaments whatever, except perhaps a little powdered sugar. Even the sugar was given merely for the purpose "of keeping up in the patient's mind the firm belief that each powder contained a particular dose of some medicine." *Facilis descensus Averno est*; and it was not long before HAHNEMANN announced his grand discovery of homœopathy, with its infinitesimal doses, to an astonished world. By careful observation and experimentation he had, he said, discovered a truth "not to be refuted by any experience in the world—that the best dose of the properly selected remedy is always the smallest one in one of the high dynamisations ($\overline{\text{X}}$ or the thirtieth dilution), as well for chronic as for acute diseases." Not only so, but he had established that all diseased symptoms are to be *cured by* the internal administration in infinitesimal doses of a drug which in larger doses is capable of producing in the healthy body a series of phenomena more or less *similar* to those of the disease. Thus arose the maxim, *Similia similibus curantur*. This extraordinary doctrine, with the infinitesimal dose theory, was dignified by the name of Hahnemannism and Homœopathy. These were the chief points on which HAHNEMANN insisted, and which formed for many years,

and do even now in the opinion of some form, the basis and the superstructure of homœopathy. But if we look a little below the surface, we shall detect not only the fallacies but also the follies of this strange doctrine. To consider first the question of "best" dose. It has been calculated that a dose of medicine of the thirtieth dilution represents the one-decillionth of a grain of the appropriate drug, and this dose is said by the founder of homœopathy to be the best dose for chronic as well as acute diseases. But of the decillionth of a grain the human mind can form no conception; such a calculation stuns the imagination. An illustration may, however, assist us in getting a faint notion of its minuteness. The late Sir JAMES SIMPSON (we really beg the homœopaths' pardon for quoting that illustrious gentleman; we have tried to keep to the writings of professed homœopaths, and, except in this instance, we shall not fail to do so) showed that one grain of a drug divided into decillionth globules, and arranged as twenty globules to an inch, would form a continuous line of such a length that light, which travels at the rate of nearly two hundred thousand miles in a second, or six millions of millions of miles in a year, would require more than a thousand sextillions of centuries to fly along it. Light, which travels the ninety-three millions of miles between us and the sun in little more than eight minutes, and which can encompass this globe in the eighth part of a second, would require this inconceivably, incomprehensibly long space of time to travel the length of this line of globules, which altogether contain but *one single grain* of the drug. Yet, infinitely small as it is, this is HAHNEMANN'S "best dose" for all diseases. The proposition that a drug so diluted is capable of exerting any influence whatever on morbid processes of the body must appear monstrous and absurd to anyone but a homœopath. It is a mere prevarication to allege that homœopaths do not all insist on the infinitesimal dose as an essential part of homœopathic doctrine. What we maintain is that it is a part, and an important part too, of Hahnemannism—that is, of homœopathy. The infinitesimal dose fallacy is still accepted in good faith by a very large section of homœopathic practitioners, who regard those who at any time give material doses of drugs as heretics and apostates from the faith of the "Heaven-inspired Apostle of Homœopathy." A recent writer, in defending the practice of administering infinitesimal doses, says: "I have become satisfied, by hundreds of successful trials, that the attenuations, from the sixth to the thirtieth, will often produce the most startling and brilliant effects; and I feel likewise called upon to testify to the efficacy of the higher preparations, even two hundredth, of arsenic, belladonna, &c." But the imagination of HAHNEMANN had already transcended even that of the credulous modern, for in later life he said: "All that homœopathy is at all capable of curing (and what can it not cure beyond the domain of mere manual surgical affections?) among excessively *chronic* diseases that have not been quite ruined by allopathy, as also among *acute* diseases, will be most safely and certainly cured by this mode of olfaction." In other words, this impudent charlatan alleged that he could cure diseases by allowing the patient merely to smell dried globules containing the decillionth of a grain of the drug. What is worse, he was believed. Surely deceit, ignorance, and credulity could go no further. So much, then, for the infinitesimal dose theory, which is, as we have shown, still accepted by a large number of professed homœopaths. On a future occasion we shall refer to the action of homœopathic remedies.

ONE of the "undetermined questions" on which much light might be thrown by those who have an opportunity of ascertaining with accuracy and completeness the circumstances of family life, is the effect of marriages of consanguinity. In this country the problem is almost limited to the effect of the marriage of cousins. The question is of great importance, for it comes up at some time or other in almost every family, and from the members of our profession an authoritative opinion is constantly expected.

A strong feeling against such unions has grown up among many of the more thoughtful and better informed members of the community. The objection is in part probably an instinctive one, but is chiefly founded on the occasional known consequences of such marriages. Instances in which the offspring have exhibited in alarming frequency defects of form or constitution have probably come within the personal knowledge of most persons, and striking examples which have from time to time been recorded are to be found in most physiological text-books. Deaf-mutism is one of the commonest defects met with under the circumstances; and the chaplain to the Association for the Deaf and Dumb has recently enumerated, in a letter to a contemporary, several sad instances which have come under his notice. In different families two, three, four, and in one case eight out of nine children were deaf and dumb, the parents being cousins. Of the frequent disastrous results of such unions there can be no question. MANTEGAZZA found that out of 500 marriages between blood relations in only 102 the offspring exhibited no morbid tendency.

It is obvious, however, that not every morbid condition occurring in children of related parents can justly be ascribed to the consanguinity. Some statistics do not show at all conclusively the influence they are supposed to prove. MANTEGAZZA, for instance, found that in 15 marriages between uncle and niece or aunt and nephew 33 per cent. of the offspring exhibited defects in constitution or development; in 107 marriages between first cousins, 28 per cent. of the children were affected; in 38 marriages between second cousins, 94 per cent. of children, and in 68 between third and fourth cousins, 41 per cent. of the children, suffered. The affection of the children in the two latter cases was obviously in great measure irrespective of the relationship between parents, and probably is of no significance as evidence for or against marriage of consanguinity. Instances also are not unfrequent in which the offspring of such a marriage exhibit no defect in development or in constitution, are in every respect strong and healthy; or if weakness does occur, it is not with greater frequency or in greater degree than is common in the children of those who are not cousins. Cases are indeed on record, especially in certain colonies &c., in which repeated intermarriage, continued even for centuries, has led to no apparent deterioration of physical condition.

The problem is rendered complex by the circumstance

that, in a large number of instances, the marriage of relations brings into play other influences than those implied in the mere fact of consanguinity. It is well known that a morbid tendency existing in each parent is transmitted with great certainty, and usually in intensified degree, to the offspring. Relations, of course, much more frequently than strangers, possess the same constitutional condition. As has been said, "consanguinity raises heredity to its highest power." Moreover, in some of the instances of intermarriage the relations have lived in contiguity, have been exposed to the same endemic influences, which have thus been intensified in their offspring, either in actual morbid states or in liability to disease. It is believed by some that all instances of defects in the offspring of such unions may be thus explained; that marriages of consanguinity do not in themselves entail any evil. Of late MATTEI, BERTILLON, and others have strongly urged this view. The latter even advocates the beneficial influence of such unions, augmenting the healthiness of families free from taint, while it brings out to the light of day concealed impurities of blood. But such reasoning involves a grave and dangerous misrepresentation. Intermarriage can only conduce to health in families free from taint by keeping out extraneous sources of impurity, while the least proclivity to disease is increased incalculably. Very few families in a community such as ours are so free from lurking mischief as to be able to venture on such a course. On the other hand, the union of a sound and an unsound individual not only may conceal but actually diminish the transmitted taint.

The question can only be determined by the careful record of a large number of cases by those who can trace out family connexions and are fully acquainted with family taints: instances, on the one hand, of the marriage of cousins, and its results; and, on the other, of the occurrence, under different circumstances, of such defective development of constitution or physique as has been attributed to intermarriage. Until this is done, and data, negative as well as positive, collected in large number, the question must remain undecided. The evidence afforded by isolated instances such as we have mentioned cannot be regarded as conclusive. But the peculiar character of many of the cases renders it difficult to understand that they can be entirely due to the influence of transmitted and intensified tendencies to disease. The form which they assume is, with curious frequency, that of defective development of the nervous system and its appendages, showing itself especially as deaf-mutism. This clearly, in some cases, results from the transmission of a tendency to disease of the nervous system, which shows itself in other members of the family as insanity or epilepsy. But if there is, as there appears to be, a considerable number of cases in which the deaf-mutism in offspring results from the marriage of cousins in which no such family proclivity to affections of the nervous system can be traced, even in the slightest degree, the probability that such defect is the direct result, in some way, of the consanguinity of the parents is very strong. It is difficult to understand how any other morbid tendency on the part of the parents would result in such a condition, either by causing defective development in that special direction, or by the mechanism of intra-uterine disease.

Whatever be the conclusion, it can, however, affect very little the practical question. Whether intermarriage be capable of generating defect in the offspring of the previously healthy, or merely of intensifying morbid tendencies already existing, there can be no doubt that the health of the community has nothing to gain but very much to lose by the practice, and that it should be, as far as possible, discountenanced. Were it not for the effect of union with healthy persons, the morbid tendencies, which so many possess, would receive, as they do when the rule is departed from, terrible augmentation. No doubt the celibacy of those with unhealthy taint would be the most desirable arrangement for the common good; but this is unfortunately, except within the narrowest limits, impracticable, and it is therefore much to be desired that morbid tendencies should be as far as possible neutralised by a wise process of "selection." The judgment of the individuals most closely concerned is often, under the circumstances too heavily, biased to be relied upon, but a great responsibility rests on the heads of families. They should discountenance firmly the marriage of near relatives, and of individuals who possess the same morbid constitutional taint. It is of the utmost importance that such unions should be as far as possible avoided—important for the happiness of the individuals, and all-important for the health of the community.

OUR readers will not have forgotten the remarkable and painful facts which were elicited at an inquest in June last on the body of MRS. ANN WOODWARD, who died shortly after delivery by MR. EDWIN PEACOCK, of Nuneaton. They were to this effect. The deceased had had ten children previous to her confinement in June. Generally she had been attended by midwives. On the occasion of her tenth confinement she was attended by Mr. PEACOCK, who delivered her with forceps. On the eleventh occasion Mr. PEACOCK was duly summoned and duly attended. He arrived about half-past ten. Forceps were again used, and the child was born about twelve o'clock. Mr. PEACOCK remained some time with the patient, "doing something" which the patient said gave her more pain than the baby's being born. He requested the husband to fetch brandy for his wife. He administered the brandy, and after a time left, saying that his patient could not live. She lived three-quarters of an hour after he left. Two women in attendance saw Mr. PEACOCK, after the birth of the child, remove something from the body of the woman, which he cut off with a pair of scissors and took away to the privy. The next morning this something in the privy attracted the attention of neighbours and excited the dissatisfaction of the husband, who remonstrated with Mr. PEACOCK on the subject and refused to let him remove it. The substance proved to be fifteen feet of intestine, chiefly ileum, with portions of mesentery attached; the cæcum and part of the colon, too, were included. The appearances at the post-mortem coincided. The uterus was not ruptured, but the vagina was; and the cut end of the intestine was found, with about two pints of bloody fluid, in the cavity of the abdomen. Such were the facts brought out before the coroner. The jury came to the conclusion that the deceased died from rupture of the uterus, and that there was no imputation attaching to the medical man who

attended her. Notwithstanding this verdict, to which Mr. PEACOCK'S previous good character probably led the jury, considerable dissatisfaction continued, and the matter was brought before the magistrates, who found Mr. PEACOCK guilty of manslaughter and committed him to take his trial at the assizes.

On the 2nd and 3rd of March the case was tried before Lord Chief Justice COLERIDGE with a great display of forensic talent on each side. Mr. FITZJAMES STEPHENS prosecuted under the instructions of the Attorney-General. Mr. DIGBY SEYMOUR and Mr. DUGDALE appeared for the prisoner. The charge against Mr. PEACOCK was narrowed to two points. The prosecution did not allege that any violence was done in the use of the instruments. But, allowing the rupture of the vagina to have been produced naturally, and a protrusion of the intestine to have taken place, it was contended that the surgeon, mistaking the intestine for the cord, used great force in pulling upon it and then cut it away, and that such a procedure showed gross negligence, ignorance, and want of skill. The questions that gave rise to most unpleasant differences in evidence were, firstly, could such a protrusion of intestine take place spontaneously, and, if not, how much force was necessary to produce it? secondly, could the cutting off of the intestine be justified on the ground that, the case being hopeless, the removal of the chance of strangulation would diminish pain and might prolong life? Answers to these questions on the side of the prosecution were given by Mr. THOMAS HANDFORD (of Atherstone), Mr. WILLIAM BIRD NASON (of Nuneaton), Mr. HAMMOND, Mr. LAWSON TAIT, Dr. ROBERT JOLLY, and Mr. OLIVER PEMBERTON; on the side of the defence were answers given by Dr. BARNES, Mr. FURNEAUX JORDAN, Mr. JOHN CLAY (Professor of Midwifery at Queen's College, Birmingham), Mr. SAMUEL BERRY, and Dr. JOHN BROWN (of Coventry), whose pupil Mr. PEACOCK had been. As to the possibility of a spontaneous protrusion of fifteen feet of intestine, Dr. BARNES says there is a case on record. We shall, doubtless, hear the particulars. Dr. BARNES is known to the profession as an authority who does not make statements without having a basis for them, and we may confidently expect to hear from him a justification of his evidence in this matter. While condemning the cutting off of the intestine, and characterising it as a rash act, he said it would prolong life by diminishing shock. Mr. CLAY went further. He said that though in such a case he would not have the courage to cut off the intestine, such practice would lengthen life for a short time, and would relieve shock; and that if he were writing a book on the question he would recommend that the intestine should be cut off. In regard to this remark we have only to say that we devoutly hope that Mr. CLAY will not write a book. Example here, verily, is better than precept.

It must be admitted that the malpractice was extreme. It could not have been anticipated that a man with a good character as a pupil, a midwifery student, and a practitioner, could, even at midnight and in difficult circumstances, and perfectly sober—for there is no imputation to the contrary, —mistake intestine for placental cord and proceed to cut off fifteen feet. We are disposed to make all allowances. Human nature is terribly liable to panic, especially in lonely villages, with perhaps no friendly help at hand; and as panic sets in all that is characteristic of the expert vanishes—judgment and courage go, and the skilful accoucheur becomes no better than an ignorant midwife. We knew the general fact, but the Nuneaton illustration of it is a psychological phenomenon for which we were not prepared. We have no defence to offer for Mr. PEACOCK'S conduct. The strength of the recommendation to mercy which the jury appended to their verdict of "Guilty" is very great, but it must rest on his previous character; and we heartily congratulate him on having a previous character that will stand him in good stead. This fact, coupled with a consideration of the injury and the distress which have already fallen on him, will doubtless weigh with the Home Secretary when application is made to him—as it will, we believe, be soon made—to remit the punishment of six months' imprisonment. While we have no defence to offer for Mr. PEACOCK, we do not judge severely those eminent gentlemen who gave evidence in his favour. No mean or selfish motive could take Dr. BARNES away from metropolitan duties to give the evidence he did give, and which provoked some severe criticisms from both the judge and the counsel for the defence, which seem to us based on misapprehension. The case is a most painful one, and with terrible force points the lesson of serenity in judgment in all circumstances.

Annotations.

"Ne quid nimis."

AN APOLOGY.

THE rumour that an action for libel was pending, which involved points of much interest to the medical profession, has been widely circulated for some months past, and by those who knew that this rumour was founded on fact the approaching trial was anticipated as likely to decide whether the statements published in a medical periodical, reflecting injuriously on a distinguished surgeon, were legitimate and justifiable. A court of law has been spared the process of investigating the matter by the course which has been adopted by those who should be the best judges of what their chances would have been had the case come on for trial. We have always held it to be the dignified and proper course to abstain from noticing attacks upon ourselves or upon members of our staff which appear in other medical journals; but we think it due to the profession and to Mr. Christopher Heath, in consequence of his having been at the time, and for many years previously, one of the most respected and influential members of THE LANCET staff, to give publicity to the apology, which, it will be seen, emanates from the Committee of Council of the British Medical Association. It is to be regretted, we think, that their supervision was not exercised from the first, so as to have prevented the repeated insertion of expressions which they have now to withdraw, especially as the articles appeared from time to time in the organ of a great medical association. We can easily appreciate the anomalous position the Council would have occupied in sustaining (pecuniarily and otherwise) their editor—the defendant in the suit—in an attack on a member of the Association in its own published organ. The Committee of Council, however, now that they "have had their attention directed by Mr. Christopher Heath to certain articles which have appeared from time to

time in the pages of *their* journal," admit that these contained expressions and statements "beyond the fair limits of controversy, and might be understood to reflect upon the honour, integrity, and candour of Mr. Heath." It is well to know who are responsible for the statements made in the *Journal*; and Mr. Christopher Heath is to be congratulated in having had the courage to insist on the withdrawal of everything that might have been understood to reflect injuriously on his character. The following is the apology referred to, which we extract from the *British Medical Journal* of last week:—

"The Committee of Council of the British Medical Association have had their attention directed by Mr. Christopher Heath to certain articles which have appeared from time to time in the pages of their *Journal*, and in particular to certain expressions made use of in an article contained in the issue of July 11th, 1874, having reference to the election at the Royal College of Surgeons.

"The expressions used, and the statements made in the articles referred to, are, in the opinion of the Committee, beyond the fair limits of controversy, and might be understood to reflect upon the honour, integrity, and candour of Mr. Heath.

"The Committee, under the circumstances, feel that it is due to Mr. Heath that the remarks which have given him any pain and annoyance should be withdrawn; while, at the same time, they express their sincere regret that they should have ever appeared."

MR. GATHORNE HARDY AND THE ARMY MEDICAL SERVICE.

THE Minister for War introduced the Army Estimates in a straightforward, business-like speech. He confessed that the subject of the Army Medical Department had given him infinite thought and consideration, and that he was still unprepared with any definite proposal in regard to it. We must at once declare that if Mr. Hardy imagines for one moment that all the present discontent and unpopularity of the service is attributable to the changed system in its organisation, he is mistaken; and that if he thinks that securing promotion to medical officers at the end of fifteen years' service will suffice to make it popular, he is doomed to disappointment. The War Minister stated, however, that he was prepared to give the subject full and fair consideration, and he indicated that the terms of the new Medical Warrant for the navy might have to be assumed as the basis of his future line of action in regard to the medical officers of the army. We have always maintained that what is best for the public is best for the Medical Service, and we approach the consideration of what should be done in the frank and straightforward spirit that characterised Mr. Hardy's remarks. To begin with, everyone at all acquainted with the Army Medical Service must know that the discontent is not the growth of yesterday, but of years. The medical officers have been so long harassed by changes, and by a succession of Warrants and Regulations, that a spirit of distrust has become developed. It is indisputable that Lord Cardwell's late Warrant brought the discontent and distrust to a focus, as it were. We do not hesitate to aver that had the change of system which it brought about been recognised as the best in the world, it must still have been eminently distasteful, seeing that some of the rights and privileges guaranteed to medical officers by a Royal Warrant were sacrificed, and that the new scheme of organisation was enforced after so arbitrary and peremptory a fashion as it was. Medical officers recognised with something like indignation that no rights — not even those guaranteed by a Royal Warrant—were secure. What was to-day applied to the matter of forage, for example, might to-morrow affect their pensions. Then, again, after years of expectancy that something was to be done for them, that some plan for maintaining a fair and equitable flow of promotion was forthcoming, and after having been educated to believe that if the new organisation came at all, existing rights would be, as far as practicable, respected, they awoke one morning to the perusal of a document by which their work was increased while their privileges were curtailed. Even the very insignificant concession of promotion after fifteen years' service rested upon the word of a minister who, as events soon proved, was removed from office at the next election. Then came the unworthy haggling about restoring half-a-crown a day to a small number of unpromoted assistant-surgeons on the part of the Government of the richest nation in the world. By the late Warrant the State got everything, the medical officers nothing. What is now required beyond everything else is some well-devised scheme for promotion, and that can only be effected by a movement in the upper ranks. Compulsory retirement at sixty years of age for those ranks would bring the Army Medical Service abreast of that of the navy in this respect, and would of itself effect an immense change for the better. There are other things—such as provision for the retirement of a limited number of surgeon-majors after twenty years' service—which might be conceded without involving the nation in any serious financial responsibility; but we would urge, above all things, that once the just claims of the department had been granted it should be left alone. The Medical Service belongs neither to the Horse Guards nor to the War Office. It meets the fate that proverbially attends those who rest on two supports or serve two masters. What with being overruled by the military and prescribed for by the War Office authorities, the Medical Service is never left to the management of its own affairs.

PROVIDENT HOSPITALS.

THE subject under discussion at a late meeting at Brighton, to which reference was made in our columns last week, and which is exciting a good deal of notice there, seems to us to be of more than local interest. The question to be decided was, whether a provident and self-supporting hospital should be instituted there, or whether the existing accommodation in the Sussex County Hospital might be to some extent utilised for a trial of the provident system. The matter is as yet undecided, although we understand that the committee of the latter institution have discovered that they have no power to make any such alteration in their statutes as would permit of the proposed experiment. So far as Brighton is concerned, then, the only point to be decided is whether or no there shall be a new hospital conducted on the provident system. And we may remark that although there were considerable differences of opinion expressed at the meeting, which seems to have been a representative one, yet there appeared to be a somewhat general agreement that the provident system was applicable to in-patient hospitals. The agitation which has been going on for some time on the subject of the abuse of medical charity, which seemed of late to have abated somewhat, is thus likely to be revived in a new form, and it may be opportune to consider certain questions in connexion with the subject.

And in the first place we may point out that the question of in-patient treatment is a widely different one from that of out-patients, to which the chief attention has been hitherto directed. It must be considered entirely apart from it, and on altogether different grounds. Moreover, the case of country hospitals is totally distinct from that of our large London hospitals, to which medical schools are attached, and to which our present remarks do not apply. One great difference between in-patients and out-patients lies in the fact that in many cases those under treat-

ment as out-patients are able to continue their work, and thus support themselves and their families, whilst in the case of in-patients they are, or should be, incapacitated from it for a time, and often for a considerable time. The statistics of the Out-patient Reform Association are, therefore, entirely inapplicable to them. We do not question, however, that a considerable number of those who are admitted to our public hospitals may be able to contribute something towards their own support, or, when at work, are in receipt of wages sufficient to allow of "laying by for a rainy day." It is to these especially that the provident system is intended to apply, and it is argued by its advocates that it tends to improvidence and pauperisation of the lower middle class and skilled operatives that they should be able to get gratuitous hospital accommodation and treatment when ill.

The question then arises as to how far such abuse exists, and by what means it may be remedied. From our own experience, we should say that the number of those who could afford to contribute anything more than a very small sum towards their maintenance in our London hospitals is very inconsiderable, and almost entirely limited to a few cases of special interest. To estimate the number of those who might have been able, had they saved their money, would, in the present state of affairs, require a far more exhaustive and inquisitorial investigation than is in the power of any medical officer or committee. We are aware that we shall bring down upon ourselves an endless array of figures and statistics with which some of the advocates of the provident system are always armed to the teeth, but we adhere to our opinion that, although statistics may be made to prove anything, no such investigation has as yet been made as is of any value for the purpose. Allowing, however, for a considerable margin of such cases, the question remains, how those might be induced to contribute who are able, but, as the experience of Hospital Saturday has recently shown, are unwilling to do so. So far as our large London hospitals are concerned, we do not believe that any system of payment could ever be enforced on account of their special conditions. There is, firstly, the necessity of selecting cases adapted for clinical instruction in those hospitals to which medical schools are attached, and it would be highly undesirable to limit the selection to patients of one class. The exceptional advantages of treatment must also be considered; and it would be obviously unfair to exclude those from its benefits who could afford to pay only a little, and hence every payment must in the vast majority of cases be optional. Upon grounds of expediency alone, therefore, we should deprecate any change. It must be remembered, moreover, that there is great controlling power on the part of the subscribers or governors, without whose letter in-patients are rarely admitted except in cases of emergency, and a large discretionary power is usually allowed to the resident medical officers as to the admission of cases. The plan which would seem least open to objection in London, and one which could without difficulty be adopted, would be that of subscriptions by Friendly and Benefit Societies to hospitals, which would entitle them to a certain number of subscribers' letters, which could be used by the members in times of sickness.

It would, no doubt, be far easier in the country to ascertain the circumstances of the patients, and to combine the provident system with already existing hospitals. We regret that the experiment cannot be tried at Brighton on account of the special circumstances. The establishment of a provident hospital will certainly give valuable experience, but unless there is a great need of extra hospital accommodation, or the persons for whom it is intended are extremely considerate, we do not see how it can be self-supporting. One suggestion which has been thrown out—viz., that it should be made to pay as a convalescent hospital for better-class patients from London,—is no doubt an ingenious one, but will destroy the value of the experiment for other towns. The scheme, if tried, should be tried in its simplicity, and subscriptions ought not to be received, otherwise the only result will be to interfere with the already existing hospital. The committee appointed to inquire into the subject will, we doubt not, investigate the question thoroughly, and the way in which the matter has been discussed is so far very creditable. But we trust they will not be led away by any one-sided statistics. We shall watch with interest the progress of the hospital, if it should be started.

THE HOSPITAL SUNDAY MEETING.

THE meeting at the Mansion House, on Monday, in connexion with the Hospital Sunday Fund was nominally a public meeting to receive the report of a Committee which had been appointed at the public meeting of Jan. 4th to report upon the principles on which awards to special hospitals and other awards should be made. Practically it bore the same relation to a public meeting that a special hospital bears to a general one, and was, to all intents and purposes, a meeting of specialists and their friends, who cheered to the echo everything that was said by their leader, Dr. Morell Mackenzie, or anyone speaking on his side, and who refused to hear any speaker that took a different view from their own. It was about the most ill-mannered meeting that it has been our lot to attend, and it was only by the threat of the Lord Mayor to dissolve the meeting that anything like order was obtained. We exceedingly regret that Dr. Morell Mackenzie should have given his sanction to such tactics as those we have described. He said indeed that he spoke in "a spirit of conciliation." If so, we can only wonder how he will speak when he is not under the influence of this sweet spirit. We have too much respect for the profession of which Dr. Mackenzie is a distinguished member to withhold our opinion of his conduct and responsibility for what occurred on Monday. His speech was full of those strong personalities and charges of unfairness which are always conspicuous by their absence in good speaking, and in the speeches of men with good causes. It would be simply impossible to conduct a movement so full of difficulties as the present one if such temper and such intolerance of the views of others as were displayed on Monday were to be repeated often. It is true that Dr. Mackenzie carried his points. But a man may carry his points at too great a cost. There were only two essential points in the scheme which Dr. Mackenzie carried as an amendment on the report of the Committee. The first was the instruction to the Distribution Committee not to subtract the contributions of patients from the basis of their award. This point was raised months ago by Dr. Glover, and had been virtually settled in favour of the provident principle. The second was contained in the following clause:—

"No person holding office in a hospital or a dispensary, whether it participates or not in the Hospital Sunday Fund, shall be eligible to serve on the Committee. This rule shall not apply to patrons, presidents, vice-presidents, or governors as such."

The initiated knew that it was meant to apply to medical men—primarily to Dr. Risdon Bennett and Mr. Durham—and to Sir Sydney Waterlow. It is not very seemly to see a medical man display in public such a distrust of his brethren, as to move their exclusion from a responsible committee, in which their experience and intelligence have been useful, though occasionally they may have erred in judgment. But the exclusion of Sir Sydney Waterlow was

too pointed to be decent. What justification can there be to the public for passing a resolution that applies to one man; that admits a president of a hospital or a vice-president to a committee, and excludes a treasurer. Dr. Mackenzie and his excited friends have done this, and they must answer for the consequences. He has his revenge on Sir Sydney Waterlow for inadequately appreciating special hospitals. But such personal movements cannot ultimately redound to the interest of special hospitals. Sir Sydney Waterlow has done more for the movement than any one man, and if the public has to choose between keeping him and keeping the favour of a few special institutions, there can be no doubt as to what its choice will be. We do not regard the meeting of Monday as either a public meeting or a creditable one. Dr. Mackenzie may regard it as a triumph. But a few more such triumphs would ruin Hospital Sunday as an institution, and even Dr. Mackenzie would admit that this would be too great a price to pay for the gratification of his warm feelings.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

NEXT Thursday, a meeting of the Council of the Royal College of Surgeons of England will be held, to elect an examiner to fill up the vacancy caused by the resignation of Mr. Hilton. On the issue of this election much depends. As we stated last week, it is very desirable that the gentleman who shall be appointed should be a past or present teacher of anatomy and surgery, and should be taken from outside the Council. We stated that the name of Mr. John Wood, who is a Fellow of the College, by examination, of 1854, and Professor of Surgery at King's College, had been mentioned. We believe, however, that he has not yet been nominated. There are, up to the present time, three nominations: Mr. J. Cooper Forster, Mr. Gay, and Mr. Erichsen, the two latter gentlemen being members of the Council. Mr. Erichsen has, we understand, declined to be put in nomination, on the ground that he is unwilling to accept an examinership in the subjects of anatomy, physiology, and surgery. Mr. Gay, an Honorary Fellow of the College of 1843, and senior surgeon to the Great Northern Hospital, is well known by many valuable contributions to surgery; he has not, however, as far as we know, been a teacher on either anatomy or surgery at any of the medical schools. Mr. J. Cooper Forster is Fellow, by examination, of the College, 1849, surgeon and lecturer on surgery at Guy's Hospital, and has had many years' experience as a teacher on anatomy at Guy's. He is, moreover, the representative of the University of London on the Committee of Reference of the Conjoint Scheme, and is not on the Council of the College.

THE MEDICAL SOCIETY.

THE Fellows of the Medical Society of London, and their friends to the number of about one hundred, met at dinner under the presidency of Victor de Méric, F.R.C.S., on the 8th inst., the 102nd anniversary, at the Criterion Restaurant. After the usual loyal toasts, the Medical Corporations were proposed by Mr. Bryant, and the Learned Societies by Dr. Buchanan, the former being answered by Dr. Stocker, Master of the Apothecaries' Company (in the unavoidable absence of the Presidents of the Colleges of Surgeons and Physicians), the latter by Dr. Williams, ex-President of the Medical and Chirurgical Society. The toast of the evening, "The Medical Society of London," was then given by the President, who, after alluding to the flourishing condition of the Society, both pecuniarily and with regard to the interest of the subjects and papers brought forward at the meetings, and wishing it every prosperity, concluded by presenting a medal to the outgoing Secretary, Mr. Woodhouse Braine, in recognition of the important services he had rendered the Society during his two years of office. The other toasts were: "the President," proposed by Dr. Richardson; "the President elect, Dr. Routh," and "the Treasurer and retiring officers."

DISCIPLINE AT OXFORD.

WE congratulate the University authorities on the determined face they have set against the increasing extravagance of their undergraduate members. The Hebdomadal Council have requested the College authorities to refuse all requests for permission to give balls and suppers during Commemoration week, and only to allow such undergraduates who may be actually undergoing examinations at that time to remain in residence. This step will greatly reduce undergraduate expenses, for these balls and suppers, with picnics to Nuneham and Woodstock, were really a very serious tax, especially to men whose income was limited, but who felt themselves compelled to do as others did. The Christ Church authorities have taken a still more decided step in interfering with the long-established "grinds" or College steeplechases. It appears that some time since the University authorities issued a notice warning undergraduates of the penalties against participating in races of this kind, and the Dean of Christ Church endeavoured to extort a promise from the men of that College not to hold the annual "grind." Failing in this, the College authorities determined to send down all the junior members, not in for examination, a week earlier than usual, in order to prevent its taking place. All right-thinking persons will applaud this action on the part of the University and College authorities, and there are many, we are convinced, who will be delighted to see a limit thus put to the hitherto boundless extravagance of undergraduate life. Many professional men would gladly send their sons to college if they knew the extent of the liabilities they would incur; it is a dread of this kind that has prevented many a parent from sending his son to Oxford or Cambridge, and induced him to seek a narrower, though safer, system of education. The University authorities might take one step further with advantage—that is, to make all debts contracted by persons *in statu pupillari* void after three months. Such a system would make the University tradesmen more careful in giving unlimited credit, and nip in the bud any incipient extravagance.

SIR ARTHUR HELPS.

THE latest grave of English literature closes over one whose writings have taken no common hold of the English heart. To thousands who never saw his face or heard his voice, Arthur Helps has been for years a "Friend in Council," a "Companion in Solitude," and his fresh, healthy, suggestive thought will be found, in the future, to have had no small influence in the formation of English opinion. A rare geniality, sound sense, thoughtful observation, and loving, straightforward effort for the right and the true, marked all he wrote, and his place in our home literature will not soon be filled.

The severe attack of pleurisy which his strength was insufficient to resist, dates from a cold commencing after his attendance at a levée on one of the bleak days which ushered in the month. How often a similar explanation for grave illness has to be given, that of needless exposure and chill in some part of our social arrangements. The days of Juggernaut are over; would that those of useless sacrifice were at an end. On the dark-stained shrine of social custom we are ready to sacrifice our best and loveliest, not perhaps in intentional arrangement, but by deliberate

neglect of reform. There is hardly an occasion of pleasure which may not improbably become an avenue of death, in ways which might effectively be guarded against. The arrangements by which girls thinly dressed, and men hardly better clad, shiver in the passages of our places of entertainment and crowded private gatherings, exposed to keen, mid-winter draughts, are in disgraceful contrast to the gilded scenes within. Why should not comfortable waiting-rooms be considered as essential a part of a well-arranged theatre or concert hall as the cushioned stalls or gilded roof? The evil comes home with force to everyone, and a remedy, if demanded with sufficient energy and perseverance, would soon be conceded.

THE BRITISH MUSEUM.

THE work of reform has already commenced in this institution; last week permission was granted by the trustees, chiefly at the instance of Dr. Hooker, to allow the clerks of the Printed Book Department to sit upstairs. We hope that having found their way upstairs they may be allowed to continue there. No amount of "doctoring" can ever make the "tank" a proper place for human beings to spend the greater part of their day in; its proper use is evidently to serve as a store-room for manuscripts, pamphlets, &c. The present concession, however, we hope is a prelude to a thorough sanitary reform in all departments of the Museum. The evils at present complained of have been slowly growing, and will intensify as the space allotted to the various departments yearly becomes less. In a few years the extension of the Museum will become a necessity, and we think the trustees would be wise to begin now and relieve the officials from the cramped and unhealthy dens in which they have to work, and before they are utterly "crowded out" by the rapid accumulation of books. The problem of ventilating the reading-room and building generally is, we admit, a difficult one, but some means ought to be adopted by which warm fresh air could be introduced from without to renew the exhausted atmosphere of the interior.

PASTEUR AND HIS OPPONENTS.

AT a late meeting of the Academy of Medicine of Paris this eminent philosopher made a valuable speech on the occasion of some experiments which were submitted to the Academy of Sciences (of which M. Pasteur is likewise a member). The experiments were made by M. Bergeron, who opened eighteen abscesses, both acute and chronic. In a certain number of these, the contents of which had not come in contact with atmospheric air, microscopic organisms floating in the pus were found, whilst in others no vibriones could be discovered. The latter belonged to children, the former to adults or old men. M. Bergeron thinks he has made an important discovery, and solved the great question of spontaneous generation, as here organic matter had produced vibriones without the intervention of germs. M. Pasteur stated that he was sorry to notice how lightly, especially in France, the most difficult scientific questions are dealt with. In 1873, continued M. Pasteur, MM. Legros and Onimus considered they had produced spontaneous yeast by means of an egg plunged in barm; but M. Gaillon, M. Pasteur's assistant, showed that these gentlemen were mistaken. Some time afterwards M. Onimus thought he had excited the formation of bacteria in an egg kept carefully from contact with atmospheric air, and here again further experiments showed that he was in error. A short time since M. Béchamp thought he had proved that what he called *microzema* caused the putrefaction of the egg; whilst the same M. Gaillon has shown that these supposed spontaneous microzema were microscopic organisms, which were derived possibly from the cloaca of the hen, and then found their way into the oviduct. M. Donné's notions, who believes in the putrefaction of eggs without the intervention of germs, have also fallen before subsequent experiments. M. Pasteur further passed in review several doctrines put forward without sufficient grounds, and which were found valueless, such as the transformation of lower organisms into one another. Nor is there more truth in the experiments of a young doctor of Montpellier, who thinks he has obtained the spontaneous formation of bacteria in the brain by cutting off the heads of guinea-pigs and plunging them into chromic acid. M. Pasteur contends that none of his own experiments, which he has now carried on for the last eighteen years, have been actually refuted. No experiments are of any value unless they have been repeated over and over again. Thus was the experiment of M. Schutzenberger, to prove that a plant plunged in a solution of sugar may give rise to fermentation without the presence of vibriones, shown to be fallacious, as such vibriones were discovered by M. Pasteur on repeating the experiment.

The speaker requested the Academy to appoint a committee to test the value of the theories opposed to his views; but his wish could not be complied with, as the matter had not been brought directly before the Academy of Medicine.

THE PATHOLOGICAL SOCIETY.

As we announced a week or two ago, the subject discussed at the Pathological Society this year will be the Pathology of Contagion, and it is now arranged that it shall be commenced by Dr. Bastian, in a paper on the Germ Theory of Disease, or the relation of bacteria and allied organisms to virulent inflammations and specific contagious fevers. The discussion will be opened at the meeting on April 6th, and it is expected that Dr. Burdon-Sanderson will speak on the first evening. Professor Billroth will most likely be present at one of the meetings, though probably not at the first, and it is hoped that Professor Lister will take a prominent part in the discussion. Other names of English and continental observers are also mentioned as likely to be present, but the arrangements are not as yet definitely decided.

UNQUALIFIED SHIP-SURGEONS.

IT will be noticed that Captain Bedford Pim has asked the President of the Board of Trade whether it is true that both British subjects and foreigners without legal qualifications are permitted to serve on board British ships, and whether such persons whose names cannot be found on the Medical Register are authorised to sign the usual and necessary certificates. We are glad to find that a member of Parliament has taken up this important question. It is well known that the regulations for securing qualified surgeons afloat are constantly evaded, and that men without the slightest fitness for the responsible duties attached to the office of ship-surgeons are appointed thereto.

COMMITTAL OF A MIDWIFE FOR MANSLAUGHTER.

IN our issue of last week we commented on the trial of Elizabeth Ingram, the midwife, who was tried at the Warwick Assizes for having caused the death of one of her patients by communicating to her puerperal fever. It has been said that the coroner had exceeded his power in committing the woman Ingram for trial. A similar case has since occurred at Salford, where a midwife named Elizabeth Marsden was on Saturday last charged before the borough magistrates with having caused the death of two of her patients by conveying to them puerperal fever during their

confinement. After hearing the evidence the Bench committed the prisoner for trial on both charges. Bail was refused. Sir J. J. Mantell, the stipendary magistrate, remarked that the case was of a most serious and fearful character. The Bench was evidently alive to the contagious and fatal character of the disease, and it can hardly be believed that, led by the stipendiary, the magistrates exceeded their duty in acting as they did.

OBSTETRICAL SOCIETY OF LONDON.

WE understand that the next meeting of the Obstetrical Society, which will be held on Wednesday, April 7th, will be devoted to a special discussion on the Relation of Puerperal Fever to Infectious Diseases and Pyæmia. The subject will be introduced by Mr. Spencer Wells, who will read a paper thereon, and it is anticipated that several eminent members of the profession will take part in the discussion, which bids fair to rival in interest the celebrated discussions on Tubercle, Cancer, and Pyæmia, at the sister Societies.

THE ONE-PORTAL SYSTEM.

THE following somewhat curious question and answer in the House of Commons, bearing on the one-portal system, are reported:—

"Mr. A. Mills asked the Vice-President of the Council whether, under the authority conferred by the Medical Act, 1858 (21 and 22 Vic., cap. 90), it was in the power of the Privy Council to establish one uniform test of efficiency for all medical practitioners in the United Kingdom, or whether further legislation would be required in order to effect that object.

"Lord Sandon.—In reply to my hon. friend's question I beg to state that the Privy Council has not the power of enforcing a uniform test. It may, however, if set in motion by the General Council of Medical Education, take measures for securing that none of the existing bodies empowered to grant certificates shall do so without securing a proper standard among the candidates, by the process of refusing registration to the candidates certificated by any examining body in default."

NORTHERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

A MEETING of the medical officers of health of the counties of Northumberland, Cumberland, Durham, and Westmoreland, is to be held in the library of the Newcastle Infirmary, on Saturday, April 3rd, at 2 P.M., for the purpose of forming an association for mutual counsel, assistance in the performance of duty, the reading of papers, and exhibiting sanitary appliances, &c. Such an association will not only be valuable to the members themselves, but also to the public, the practical effect being to make the district one large sanitary area.

DIPHTHERIA AT WOOLWICH.

IT is to be hoped that, as a matter of humanity, some one will call the War Minister's attention in the House to this subject. Cases of diphtheria continue to occur in the families occupying the married soldiers' cottages on Woolwich Common. Why have they not been vacated? If these places contained stores that were being sacrificed we may be perfectly sure that no time would be lost in removing them to some better place. Why, it may be asked, is not the same practice pursued when the lives of human beings are concerned?

SCHOOL-SHIPS.

AT the annual meeting of the managers of the *Cumberland* training-ship, held at Liverpool some few days ago, it was announced that an application was about to be made to the Government to admit 500 in lieu of 360 boys as residents. A proper amount of cubic space afloat is so very important, especially when a vessel is at fixed moorings, that the merits of a request of this kind should be carefully canvassed before the request is granted. Indeed, as we indicated on the 27th ult., cubic space, as well as other sanitary requirements in school-ships and training-ships, should engage the serious attention of the Board of Trade; and, if a capitation grant is to be allowed, certain conditions should be imposed in accordance with these requirements.

HEALTH OF BRIGHTON.

A REPORT of the sanitary condition of Brighton during the last quarter has been issued by Dr. Taaffe, medical officer of health. The death-rate for the period, inclusive of residents and visitors, was 22·7 per 1000, which is rather higher than we would wish to see it. Of the deaths, 163, or 29·2 per cent., were of children under five years of age. The seven principal zymotic diseases were represented by 48 deaths. No fatality from small-pox or measles was recorded. It was observed that the mortality from enteric fever, diphtheria, scarlet fever, and erysipelas chiefly occurred in houses which, on inspection, were found to be defective in their drainage arrangements.

AN epidemic of enteric fever has for some time past prevailed in Crosshill, a suburb of Glasgow. Patient investigation into the conditions of the outbreak proved pretty conclusively that the disease originated and was spread through the medium of contaminated milk. The sanitary authorities have now warned milk-vendors against purchasing their supplies from any of the suspected farms, a list of which is given, and they furthermore recommend the inhabitants to boil their milk before using it. This precaution is a very necessary one, and joined with other measures of supervision which have been adopted will, we hope, speedily arrest the progress of the epidemic.

AT a meeting of the medical practitioners of Wigan and the surrounding districts on Thursday evening, the 4th inst., it was resolved to form a Medical Society, having for its objects the mutual interchange of ideas, discussion of cases, reading of papers, and the consideration of medico-ethical subjects. The following gentlemen were elected office-bearers for the ensuing year:—President: J. White, Esq. Vice-President: C. D. Shepherd, Esq. Committee: Messrs. E. H. Monks, W. Hart, and R. S. Hall. Hon. Sec. and Treasurer: Mr. W. Berry.

A MEMBER of the House of Commons, in drawing attention to the proceedings in the case of Elizabeth Ingram, on whose trial we have commented, asked Mr. Sclater-Booth whether it was his intention to introduce a measure for controlling the practice of midwifery by women. A reply was elicited that the subject was found to be a difficult one, but that the Government would shortly take it into consideration. The sooner a legal enactment placing midwives under competent supervision is passed by the Legislature the better.

AN examination for granting certificates in State Medicine will be held at Cambridge University in October next, commencing on the 5th of that month. It will be open to all registered practitioners above the age of twenty-four years. Application for admission to the examination should be made to Professor Liveing, Cambridge.

WE regret that we have been compelled to postpone until next week the insertion of an article already in type on the organisation of the Army Medical Department, referred to by Mr. Gathorne Hardy in his speech on Monday night.

IN a report presented to the Ilkley Local Board, Dr. Scott, the medical officer of health, gives a very favourable account of the condition of the town. The number of deaths registered during the past year was 36, which is equivalent to the small death-rate of 12 per 1000 annually. Of the total deaths two only could in any way be ascribed to preventable diseases—one due to simple continued fever, and the other to puerperal fever.

IN the metropolis, 1880 deaths were registered last week, including 2 from small-pox, 12 from measles, 36 from scarlet fever, 13 from diphtheria, 58 from whooping-cough, 23 from different forms of fever, 18 from diarrhœa, and 612 referred to diseases of the respiratory organs. The mortality from the latter class was greatly in excess of the weekly average. Of the Continental cities, Rome heads the list with the high death-rate of 45 per 1000 annually.

THE Lord Mayor has convened a meeting of the Council of the Metropolitan Hospital Sunday Fund for Tuesday next, when the resolution passed at the public meeting held on the 8th inst. will be considered.

MR. WILLIAM COLLES, Surgeon to Steevens' Hospital and lecturer on Surgery at the Hospital College, has been appointed Regius Professor of Surgery to the University of Dublin, in the place of the late Mr. Adams.

DR. ALEXANDER MILNE, Edinburgh, has been elected a corresponding member of the Gynæcological Society of Berlin.

THE SANITARY LAWS RELATING TO SEAMEN, SHIPS, AND EMIGRANTS.

MORE than twenty years have now elapsed since the principal Merchant Shipping Act became law. This Act consists of eleven so-called parts, and more than 500 clauses; and since 1854 seven or eight Acts, all relating to the same subject, have been passed. As the laws relating to merchant shipping have lately occupied the attention of the general as well as the mercantile public, the Board of Trade have prepared a digest of all the Acts, and it is a matter of great satisfaction to possess at least the medical and sanitary clauses of these laws in one book, and almost side by side for reference. They refer (1) to food and water provided for seamen afloat, (2) kind and quality of medicines and of antiscorbutics to be carried, (3) medical inspection of seamen, (4) registration of births and deaths and cases of sickness that occur at sea, (5) arrangements of emigrant ships, including scales of diet, issue of lime-juice, and examination of medicines and medical stores, (6) medical inspection of emigrants before sailing, and (7) issuing by Orders in Council of special rules for preserving health when epidemics exist.

(1) With regard to food and water, no scale of provisions is fixed by law for any class of ships, but certain scales that have, with little variation, been in use for more than twenty years are still adhered to. The 221st and two following clauses of the Act permit three or more of the crew to make an official complaint as to the quality of food and water provided, subject to forfeiture if the complaint be frivolous, or to an allowance if it be sustained. These clauses are practically inoperative, as sailors working afloat have few opportunities of putting the law in action, even if they knew how to do so.

(2) Clause 224 relates exclusively to antiscorbutics, and its provisions were entirely revised by the Duke of Richmond eight years ago. One ounce of lime- or lemon-juice, which has been officially examined and fortified with rum or some other spirit, is served out daily to every seaman on long-voyage ships, and any neglect to drink it is (or should be) recorded by the master in the official log-book. This measure (assisted probably also by the increased speed of ships and the diversion of transit consequent on the opening of the Suez canal) has worked so successfully that, since 1868, the first year in which it was in operation, scurvy has been reduced in the British mercantile marine by 80 per cent. Seven official inquiries only have been ordered by the Board of Trade during the past year on account of outbreaks of this disease, which would soon become almost extinct afloat if owners of ships sent only healthy men to sea. Clause 226 enables the Board of Trade to appoint inspectors to examine the quality of lime-juice, medicine, medical stores, &c., and the next clause indicates a penalty for manufacturing or selling any of these articles that are of bad quality. This clause, as regards the lime-juice, is superfluous, because the juice is always analysed by Inland Revenue officers before it is fortified and shipped. As regards medicines and medical stores, the clause has been up to the present time a dead letter; because, as far as we know, the Board of Trade never causes any examination of these articles to be made. It is to be remarked that the law does not require any medicines or medical stores to be carried by "home trade" ships, which term includes not only ordinary coasters, but vessels trading between this country and the Channel Islands, and the continent of Europe between the river Elbe and Brest.

(3) Clause 228 *permits* seamen to be medically examined before signing articles, and permits the Board of Trade and the Local Marine Boards to appoint medical inspectors. The former have appointed inspectors in most of the outports under their control, who at present have had no work to do. The chief local marine boards (notably at the ports of London, Liverpool, and Glasgow) ignore the clause altogether, in that they have not yet appointed inspectors, although the Act has been in operation seven years. A strenuous effort is being made just now to render the provisions of this clause compulsory.

Clause 230 provides that every foreign-going ship having one hundred or more persons on board shall carry a medical officer. The Board of Trade have recently been "looking-up" the qualifications of mercantile marine medical officers, and, as we think, greatly to the advantage both of practitioner and client.

Clause 231 was revised in 1867, and, as regards accommodation of seamen, provides that each shall have a minimum bunk or cabin space of seventy-two cubic feet and twelve superficial feet measured on the deck or floor, properly lighted and ventilated. The last sentence is somewhat loosely worded, but we are informed that the clause works fairly well, that both forecastles and deck-houses have vastly improved during the last six or seven years, and that those dark and dangerous dens called lower forecastles are slowly disappearing.

(4) Clause 274 provides forms for the master of the ship wherein to fill up particulars of births and deaths that occur at sea; and a simple list of causes of death is provided for this purpose in the authorised Medical Guide, which is (or should be) carried in all ships' medicine chests. He is presumed also to refer to the "Guide" in registering cases of illness in the official log-book.

(5, 6) Clause 329, referring to the very important subject of emigrant ships, throws the entire responsibility in connexion with the accommodation of passengers and quality of food and water, on the emigration officer, the functions of the medical inspector of emigrants being, as herein stated, confined to the examination of the emigrants before sailing, and also of the medicine and medical comforts. We remarked in a special report on emigrant ships some two years ago that the hands of the medical inspectors should be strengthened, and more responsibility given them, to the relief of the emigration officer, who is not expected to know much about sanitary matters, and has a large amount of other responsible work to do. Some of these suggestions have been carried into effect, but the unsatisfactory and necessarily hasty mode of examining the emigrants on board ship is still adhered to. Power is given to the emigration officer to prohibit the embarkation of any person suffering from any disease, and the same officer may cause such person to be disembarked, or require all the crew and passengers to be relanded, if necessary, for the purpose of cleaning or fumigating the ship. The same clause provides that a medical officer be carried whenever the total number of

persons on board exceeds 300, or whenever, with more than fifty passengers on board, the voyage exceeds eighty days by sailing, or forty-five by steamship. The scale of diet enjoined by law is fairly liberal, but on the large steamships in the American trade is not adhered to, the provisions being abundant in quantity, and excellent both in quality and variety. Lime-juice is issued to emigrants only in the tropics, additional allowances being served out at the discretion of the medical officer.

(7) The concluding sanitary clauses, relating to Orders in Council, give power to frame any special rules for promoting health and securing cleanliness and ventilation on board emigrant ships, allowing the use of distilling apparatus under certain circumstances, defining the quantity of fresh water to be carried, and prohibiting emigration from any of our ports when cholera or any epidemic disease is prevalent in the United Kingdom.

We submit this summary of the sanitary clauses of the Merchant Shipping Acts to our readers, because, in their practical bearings, these clauses have important relations to certain sections of the Public Health Act of 1872, should be construed with them, and hence should be read and studied carefully by all port medical officers of health. We hope in a future article to point out how these two Acts, as it were, dovetail into and are liable to clash with each other.

Correspondence.

"Audi alteram partem."

CROUP AND DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—I am sure Dr. Geo. Johnson would not knowingly make a misquotation, and hence I conclude his citing me to say "English cholera" instead of English diarrhœa, which was the term I used, must have happened through his not sparing enough attention for that part of my argument, which I accordingly respectfully leave to his further consideration.

And, indeed, both sides of this great question concerning the identity of croup and diphtheria need be well considered. All the evidence Dr. Johnson adduces for this identity is that they both produce false membranes in the trachea, and that we can only infer identity of cause from identity of effect. But, Sir, we already see that this identical effect, the false membrane in the trachea, has been produced (1) by boiling water, or rather steam, for there is no reason to think the water itself ran down the trachea; (2) by fumes of acid; (3) by a bean in the trachea. In the face of this surely Dr. Johnson cannot argue that membranous tracheitis, because it is the same thing, must always have the same cause. We see already four kinds of cause—acid fumes, steam, diphtheria, and a bean. Cold air *may be* as great an irritant as a bean.

But I can show nearly certainly that cold air *is* as great an irritant as the bean. It has hitherto, in this discussion, been assumed that fatal sporadic croup always brings false membrane. This is, however, not the case. Thus I saw a child for four days who, after long exposure in an easterly wind, was for that time the subject of true croup, the tracheal inflammation slowly increasing until, suffocation being more than imminent, I could not await Mr. Bryant's arrival, but opened the trachea with my pocket-knife. The child was quickly relieved, but died next day, and post-mortem examination showed that *there was no false membrane whatever present*. Cases also are known to occur which offer every gradation between mucus and false membrane. Would such cases as the above be claimed as diphtheria? Surely no; for they have not even the membrane, by which alone we are told to identify that disease. They are simple tracheitis.

Now, Sir, I would ask Dr. Johnson to give his judicial and impartial consideration to the following argument or point of view. First, as the simple tracheitis kills without false membrane, or with approaches to false membrane, its fatal severity is sufficiently proved; and, secondly, as the various simple irritations of a bean, of steam, or of the fumes of acids, bring false membranes in the trachea by their severity, and as simple inflammatory tracheitis proves its severity by killing, it is surely to be expected that the simple inflammatory tracheitis which is severe enough to kill is also severe enough to bring false membrane, like the various other grave irritations. Very humbly I think, if Dr. Geo. Johnson sees no cogency in that evidence, the majority of other people will form a different estimate of its force.

One word as to the practical importance of the question. A hasty decision is much to be deprecated because of the issues at stake. It was the conviction I had of this which induced me to write as I have done, fearing, through my respect for the opinions of Sir W. Jenner, Dr. Geo. Johnson, and yourself, that such authorities being all on the same side, it might be decided offhand that in England grave croup is diphtheria. But the saving of life may depend on one's not holding such a belief. Thus I saw, not long ago, with Dr. Magor, of Hornsey, a child with grimly "true" croup, whose condition grew steadily worse and worse during some days, until it was slowly suffocated in the usual miserable and horrible way, and it had apparently breathed its last. I then opened the trachea with Dr. Magor's assistance, and, as the child gave no signs of breathing, I sucked a quantity of mucus from the windpipe, and Dr. Magor did so also. Then, the air-passage being cleared after eleven minutes of steady artificial respiration, the child took a breath, and slowly came in a few more minutes to life again, and though it died four days after of pneumonia, we had the satisfaction of giving it—it was an only child, six years old—a fair chance of recovery. To do this, if croup is really diphtheria, would be foolhardy in the extreme; but neither Dr. Magor nor I came to any harm by what we did; and as a pledge of the earnestness of my conviction, if from no other motive, I would be ready to do the same again in a case of what I considered to be true croup and not diphtheria.

Now, on their other part do Sir W. Jenner and Dr. Geo. Johnson, when they meet with a case of sporadic croup in a member of a family of children, order all those precautions which they would enforce if sporadic scarlatina appeared in that family? They must, I suppose, do so if they are quite clear that such croup is diphtheria. But is this the usual practice? and, if not, why has not experience made it so?

Sir, this question is one of vast moment, and surely cannot be settled superciliously nor by pungent sentences. Probably, whatever we all say, the common sense of the profession will still continue to recognise fatal true croup as a disease distinguished from diphtheria by its sthenic severity and suddenness, and by the absence of contagion.

I am, Sir, your obedient servant,

Finsbury-circus, March 9th, 1875. WALTER MOXON.

To the Editor of THE LANCET.

SIR,—The very simple point in my last letter hardly seems to be met by Dr. Johnson's reply, full of material and interest as his communications always are. That point is that the natural history of membranous croup, as existing from thirty to fifty years, is not identical with the natural history of diphtheria as of late prevailing. I raised no question for the moment as to anatomic identity, nor as to whether real diphtheria has prevailed at different times and places since the time of Aretæus; most likely it has, and most likely it has often enough been called angina maligna and sundry kinds of names.

What I mean by non-identity of natural history is this:—1st. That a fair excerpt of the descriptions of croup current from 1820 to 1850, does not supply a delineation in any degree truthful of the course of modern diphtheria. 2nd. That the image of croup, as it possessed the medical mind from 1820 to 1850, is not at all conformable with the image of diphtheria now prevailing in the profession. 3rd. That at a given crisis, say about 1855, the profession was distinctly conscious of this breach of conformity; that men who had been intimate with croup for years confronted diphtheria in amazement; and that though some of their cases must have been pretty purely suffocative and laryngeal, they failed to recognise in them an ancient foe.

It seemed to me clear therefore, either that one and the same poison had not been always at work, or that it had largely modified its method of self-presentation. Such variations of type may be easily explained; but it needs to be met and explained away, or it will continue to be, as it doubtless has been, one great hindrance in the minds of middle-aged men to the reception of newer views. They know what croup was, they see what diphtheria is, and, rightly or wrongly, struggle against the conclusion that they are the same disease.

I went on to state in my last letter, and I repeat now, that the principal point of difference in the two chapters of natural history appears to be this—that a case of purely laryngeal diphtheria nowadays would be a unit in a series of cases, the other units of which series differed from itself, whereas a case of old croup had no such immediate surroundings of faucial, glandular, paralytic, and scarlatinoid brethren.

Dr. Johnson is startled at my saying that hardly one-tenth of the deaths from diphtheria are due to suffocation. But there are degrees of directness in suffocation, varying from the six or eight years process of senile bronchitis to one minute and a half in the practice of Professor Calcraft. Even in scarlet fever death is often accelerated by interference with the air-passages. My affirmation was that the acute and direct strangulation, which was the rule in croup, is really exceptional in diphtheria.

Dr. Johnson asks, fairly enough, whether I believe that membranous croup at the present day is ever other than the result of the diphtheritic poison, and if yes, on what grounds. I will not venture to state that it ever is. We are all waiting for the verdict on this point. There will be room for a doubt, however, in my mind till that more inclusive axiom, *Omnis diphthera ex diphtheriâ* is definitively settled. Believing at present, not dogmatically, but in a feeble way, that we may have diphtheria without a membrane, and a membrane without diphtheria, having seen two bad cases with paralytic sequelæ (cardiac, and ciliary muscle) in which no membrane ever existed, and another, now under treatment, of stomatitis from toothache, with submaxillary abscess, during which a roll of distinctly diphtheritic membrane formed under the tongue, beside the frænum, without a scintilla of evidence, except the membrane, that any specific poison was at work, I venture provisionally to think that the truth may possibly one day define itself thus:—

1. That a mucous or cutaneous surface may sometimes effuse membranous material under non-specific excitation.

2. That some special excitants, telluric or atmospheric, possess the power and habit of arousing this exudative faculty in special regions, the product being still non-specific.

3. That the false membrane may appear as a feature and consequence of specific blood-poisoning, when it becomes, of course, itself specific and poison-bearing.

As an illustration, not exact but suggestive, may be cited the exudation of herpes, sometimes neither specific nor specially localised, as from teething; sometimes specially localised but not specific, as in shingles and after influenza; sometimes associated with and bearing a specific contagion, as in herpes circinatus. Erysipelas might supply even truer exemplications if studied with that view.

Dr. Johnson must forgive me for airing these fantastic ideas side by side with his more solid conclusions. Perhaps he will also pardon one more intrusive suggestion: if in due time he should establish his position and show all these cases to be the result of one and the same poison, surely he will withdraw the nomenclature now proposed. If membranous laryngitis is diphtheria, why not call it so? Stridor is but a feeble link wherewith to join it to essentially different conditions. The profession is only wedded to the word croup because of the happy way in which its vagueness coincides with the vagueness of the pathology which gave it birth. Precision of idea will soon not only permit but demand fitting expression. Suppose three children in one family smitten with diphtheria, should we class the case of the one who died acutely strangled as a congener of laryngismus stridulus under the head of croup because the child crowed; and the case of the second, under the adynamiæ, because it ended by exhaustion; and the third as a neurosis, because fatal through paralysis of the heart? Even membranous laryngitis would not do any more than phagedænic tonsillitis would do for some cases of scarlet fever. Dr. Johnson has long had the real matter before him, and no man is more likely to work it thoroughly out. If he can satisfy the world that all these eventualities are varieties of one given disease, diphtheria, and the product of one definite poison, let the whole be called by one name; let the nomenclature follow the facts.

By all means specialise by qualifying adjuncts if required, as laryngeal diphtheria, diphtheric paralysis, &c., but always include the name which indicates what the condition essentially is, and suppress those which indicate affinities which it essentially has not. Membranous laryngitis, as suggested by yourself, Sir, and Dr. Johnson, would but little affect the general pathologic idea; it would bespeak no caution against infection, nor invite any other treatment from the routine practitioner than such as he had habitually employed for "inflammatory croup."

Asking you to permit this one more intrusion,

I am, Sir, yours faithfully,

Maidstone, Feb. 19th, 1875. STEPHEN MONCKTON.

BIRMINGHAM MEDICAL INSTITUTE.

To the Editor of THE LANCET.

SIR,—Whether homœopaths shall be admitted as members of the Medical Institute recently formed in this town, is a question of such vast importance to the medical profession that I feel no hesitation in submitting these few remarks on the subject to the notice of your readers.

It appears to me that the whole thing lies in a nutshell. Homœopathic practitioners, or professors, or whatever they they are called (and it matters little whether their system is sound or unsound), have gained admission into the ranks of a profession the principles and practices of which they altogether disapprove, and having secured their degree or diploma from one or other of our own colleges, on the faith of doctrines known as allopathic or, in other words, having obtained a licence to practise in accordance with the principles of "allopathy," they forthwith discard the very system they were admitted to practise, and embrace an entirely new one, the benefits of which to the public are as infinitesimal as the globules they profess to use. This new system has laboured hard, and is still labouring hard, to upset and destroy the legitimate system of medical practice on which they have so improperly entered, and with which they are now seeking to become more intimately identified.

It will be in the recollection of many of your readers that Dr. Newman, and other ministers of the Church of England were admitted into the clerical profession as homœopaths were admitted into the medical—viz., through the same portals as the legitimate members of those professions; but Dr. Newman feeling a conviction in his mind that the doctrines of the Church of Rome were the sound and true doctrines—and there have been many similar converts to the Church of England,—honestly and honourably seceded from the Church of England. But, Sir, how have the homœopaths acted? Have they honestly and honourably seceded from a profession of which they disapprove? If they are possessed of those honest and honourable feelings, how can they remain members of a profession with the principles and doctrines of which they utterly disagree? Surely such men have no right to expect to be recognised by the legitimate members of the medical profession, and if so, surely they can have no claim to be admitted as members of a society which was founded for the establishment of a medical library and for the dissemination of the principles and practices of allopathy. It is idle for the local press, or rather for a portion of it, to write such nonsense about depletion, mercurialisation, &c. The medical profession is far above such petty sneers. A profession which at the present moment is dispensing its gratuitous advice and assistance, entirely without fee or reward, to one-third of the population of this kingdom, may well afford to hold in contempt the sneers and the taunts of another profession which gives not one jot of its professional earnings to this or any other benevolent object.

I am, Sir, yours, &c.,

EDWIN CHESSHIRE, F.R.C.S.

Newhall-street, Birmingham, March 8th, 1875.

SELF-SUPPORTING HOSPITAL AT BRIGHTON.

To the Editor of THE LANCET.

SIR,—In your number of to-day, when referring to a meeting which has been held at Brighton for the purpose of establishing a self-supporting hospital in the town, you allude to a discrepancy of statements respecting the extent to which the Sussex County Hospital is abused by persons who have no claims upon its charity. This discrepancy, no doubt, arises mainly from the difference of opinion entertained by the speakers as to the class of persons who are or who are not entitled to hospital or dispensary relief. As the whole question of the medical charities of the country is now being freely discussed, it would seem to me very desirable, in the first instance, to obtain some more definite views upon this part of the question. Of course everybody admits that persons who have a good income for their position in life, and can afford to pay a general practitioner's charges, are not proper objects for hospital or dispensary relief. But there are numerous other classes of individuals respecting which there would seem to be some considerable difference of opinion. Amongst these I may mention—(1) Domestic servants whose masters or mistresses have never given anything to the charity—a numerous class of applicants both to hospitals and dispensaries. (2) Single men, mechanics, &c., earning their 25*s.* or 30*s.* a week, more especially when they have contracted venereal complaints. Dispensaries and the out-patient departments of hospitals are thronged with such cases. (3) Persons who employ and pay a general practitioner in the country, but who are constantly going long distances by railway to get advice and medicines for nothing at some neighbouring charitable institution. (4) Members of benefit clubs who have a regularly appointed medical man. (5) The strictly pauper class, who have no regular means of subsistence, and who get parish relief,—fit objects for medical charities.

Upon all or any of these points I should very much like to have your valuable opinion.

I am, Sir, your obedient servant,

WILLIAM KEBBELL, M.D.,
Senior Physician to the Sussex County Hospital.

Upper Brunswick-place, Brighton, March 6th, 1875.

To the Editor of THE LANCET.

SIR,—Noticing your paragraph in to-day's LANCET, in which you say that the question of adding a provident ward to the Sussex County Hospital is under consideration, I am able, as the hon. secretary to the proposed new hospital, to inform you that the Committee of the former institution have decided *not* to take any action in that direction. They find that it would necessitate an alteration in their statutes.

I am, Sir, yours truly,

North-street, Brighton, March 5th, 1875. W. WILKINSON.

BIRMINGHAM.

(*From our own Corr pondent.*)

THE Town Council seem determined to remove the stigma of unhealthiness which has recently attached itself to the town. In spite of the obstruction offered by many parsimonious and ill-advised members, there is a sufficient number of intelligent, right-thinking men among them to carry out the work of sanitary reform. Ten additional inspectors of nuisances and sixteen disinfectors and whitewashers are to be at once engaged. A complete sanitary inspection of the borough is being made, and where occupiers or owners of houses are unable or unwilling to do what is necessary to prevent the spread of infectious diseases, it is the intention of the Sanitary Committee, with the direct authority of the medical officer of health, to have the requisite work done. Mr. Cross's Bill will be of great assistance in enabling the corporation to get rid of some of the pestilent rookeries which infest the older parts of the town. Of the one hundred and one houses which I mentioned in my last letter as having no water-supply, thirty-one have already had water laid on, and the owners of the remaining seventy will be compelled to provide for their tenants an adequate water-supply. Small-pox is steadily declining: only thirty-seven patients remain in hospital, as compared with forty-two last week, and the new cases are diminishing in number. The death-rate stands at 31·2 per 1000. Whooping-cough is causing the highest mortality among the so-called zymotic diseases, and only two deaths occurred from variola during the past week.

The Hospital Saturday collection, to be held on the 18th inst., promises to be unusually good. A very large amount of sympathy with the movement is being exhibited in nearly all the factories and workshops of the town.

The annual meeting of the General Hospital was recently held, and again an encouraging report was presented. During the past eighteen months 3949 in-patients and 32,234 out-patients were attended to. The ordinary income was £15,590. The drainage of the hospital has been entirely renovated, and every effort made to improve the sanitary condition of the building. With age the hospital (now in its ninety-sixth year) shows no sign of decadence, but, on the contrary, exhibits a bright example of energy and good management to the younger charities of the town.

Mr. Pemberton's opposition to the admission of homœopaths to the Birmingham Medical Institute has led to his receiving an unwarrantable amount of censure and abuse from the Liberal newspapers of the town. The *Morning News* and the *Daily Mail* have signalised themselves by indulging in a remarkably vituperative style in speaking of Mr. Pemberton and those who have dared to think and act with him. THE LANCET also has come in for a fair share of obloquy and denunciation. It will be time enough to talk of the opinion of the profession being on the side of the trustees of the Institute when that opinion has been definitely endorsed by a majority of the profession. Until such a decision has been arrived at, the question of the admission of homœopaths cannot be considered as settled, and until it is the future of the Institute is not assured, in spite of the confident declaration of the trustees that they are prepared to carry the greatest medical institution which was ever projected in Birmingham to a successful issue.

The Birmingham Sanatorium at Blackwell is doing a useful work, but is hampered by the want of funds. £2000 is still needed to complete the payments for building and furnishing. 716 patients were received last year, and the average number of beds occupied during the year was 34. With increased funds at their command the institution might be made by the Committee to do a much greater amount of good to the convalescent sick people of Birmingham than it now does.

Birmingham, March 6th, 1875.

Obituary.

CHRISTOPHER H. BARNES, F.R.C.S., L.R.C.P., &c.

WE regret having to record the death, on Feb. 25th, of Christopher Hewetson Barnes, of Coleherne-terrace, South Kensington, one of the few remaining pupils of Abernethy. Mr. Barnes was born on July 20th, 1801, was educated at St. Bartholomew's Hospital, and became a member of the College in 1824. He was a surgeon in H.E.I.C.S., and subsequently set up in practice at Notting-hill, at which place he succeeded in forming a large connexion. He afterwards carried on a high-class asylum for lunatics at Kensington House, from which he eventually retired, leaving the sole superintendence to his partner, Dr. Wood. He was a member of the Royal United Service Institution, Whitehall.

During the last few years he sustained severe personal losses and affliction, and out of a large family leaves only four children, the youngest of whom, we understand, is pursuing his studies at St. Bartholomew's Hospital. Mr. Barnes was always esteemed by both rich and poor for his great kindness of heart and sterling qualities. He was contemporary of Skey, Kiernan, Wormald, and Roupell, the last-named having been one of his most intimate friends.

FREDERICK BLUNDSTONE WHITE, M.D., M.R.C.P.

DR. F. B. WHITE died at Tetbury, Gloucestershire, on February 4th, in his eighty-third year. Having finished his studies at St. George's Hospital, he became a member of the College of Surgeons, London, in 1813, and soon after passed the Army Medical Board, and was appointed to the 73rd Regiment, which he joined in Holland. He was present at the siege of Bergen-op-Zoom, March 8th, 1814, under General Sir T. Graham (afterwards Lord Lynedoch), when nearly all the British soldiers were cut to pieces or made prisoners, and volunteered to look after his men, a post of no ordinary danger. In 1815 the 73rd was ordered to join the army in Belgium, and Dr. White was present at Quatre Bras and Waterloo, his regiment having but three officers not killed or wounded. After the engagements he went with the army to Paris. On coming home, the 2nd battalion, to which he was attached, was disbanded, and after four years' service he went on half-pay, married in 1820, and took to private practice at Nether Stowey, in Somersetshire.

In 1827 he was offered the appointment of Surgeon in Ordinary to the late King, then Duke of Clarence, which he declined, but in the same year moved to Tetbury, where his practice became large, and in 1840 he proceeded as an Extra Licentiate of the College of Physicians, London, then M.D. Giessen, and M.R.C.P. (exam.) in 1859. He was also Physician to Tetbury Dispensary, and F.L.S.

Dr. White's keen perception, accurate diagnosis, and genial manner secured him the affectionate regard of all classes, and his opinion was much valued, even after his retirement from active work, in the two counties alluded to. He returned only last autumn to Tetbury, the scene of his former labours, to pass peacefully away in a ripe old age.

SENATOR BURCI.

THE Italian medical journals contain accounts of the late lamented death of Professor and Senator Burci. This distinguished member of the profession in Italy has died of a pulmonary affection, at the age of sixty-one. He began the teaching of medicine at an early age, first as Vice-Professor of Surgery, then as Professor of Pathological Anatomy, at the Medical School of Florence. He afterwards left this city to take the Surgical chair of Professor Regnoli, at Pisa, but returned some time after to his native place, to take charge of the Clinique of Surgery, left vacant by the death of Professor Ranzi, and which he occupied for several years with great distinction, until a surgical wound, by destroying two of his fingers, disabled him for surgical work. He was remarkable as a clinical teacher, a safe and brilliant operator, and an eloquent speaker. His two principal literary productions were his well-known treatises on Cistotomy and Hernia.

Medical News.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on March 4th:—

Barnes, Edwin, Accrington, Lancashire.
Bass, Charles William, Barnsley, Yorkshire.
Cumming, Hugh Gordon, Exeter.
Clutton, Henry Hugh, St. Thomas's Hospital.
Gill, John, St. Thomas's Hospital.
Henwood, John Davey, Millbrook, Cornwall.
Hind, Henry Joseph, Twickenham.
Phillips, Charles Henry, Bury, Lancashire.
Scott, Alexander Thomas, Camden-town-road.
Thompson, Alfred, London Hospital.
Weddell, William Henry, Stamford, Lincolnshire.

The following gentleman passed the Primary Professional Examination on the same day:—

Tyrrell, Frederick, St. Mary's Hospital.

THE Dean of Westminster will be installed as Lord Rector of St. Andrews University on the 31st inst.

DR. FRANKLAND reports that the condition of the Thames water during the past month was very unsatisfactory. The Grand Junction Company's supply contained moving organisms; that supplied by the Kent Company is praised for its purity.

MR. E. RAY LANKESTER, Fellow of Exeter College, Oxford, has been appointed Professor of Comparative Anatomy at University College, London.

LOUISE LATEAU.—The doctors appointed to examine into the case of Louise Lateau, the Belgian ecstatic, whose "stigmatisation" and fasting have caused so much discussion, have sent in a report in which they say they are convinced she is supplied with food. They advise that the affair should be more thoroughly investigated.

THE following members of the profession attended the Queen's Levée on Wednesday:—Surgeon-General Murray; Drs. Langdon Down, Vernon Bell, Arthur Farre, Fraser, Cape, Grigg, Jonas R. Leake, Leonard, R.N., Alexander Marsden, Alfred Meadows, Monro, R. Turke Pigott, D.C.L., Rae, Reginald Read, Louth, W. Sedgwick Saunders, and L. S. Forbes Winslow.

BEQUESTS &C. TO MEDICAL CHARITIES. — The London Hospital has received £100 per W. J. Thomson, jun., Esq., being a thank-offering. Captain Mildmay Willson has given £200, Sir John Ramsden, Bart., £105, and Sir R. Sutton, Bart., £100, to the new County Hospital, Lincoln. Miss S. D. Pilkington has bequeathed £100 to the Stewart Institution for Imbeciles, and a similar amount towards the building fund of the same institution.

PRUDENTIAL ASSURANCE COMPANY.—The twenty-sixth annual report of this Company shows some large figures. The Company, which transacts the greater portion of its business among the working population, has issued in this branch, during the year 1874, no less than 888,000 policies, and increased its premium income by £145,000. A great deal has been said about the improvidence of the working classes, but the report of this Company gives another and a pleasing side to the picture, for we find that its annual income from industrial assurances is £615,641, and that the claims paid amount to no less a sum than £1,330,000. The premium income of its ordinary branch is £71,000, and the whole transactions of the year show a profit of £90,000.

Medical Appointments.

BOOKEY, T. L., L.K.Q.C.P.I., L.M., L.R.C.S.I., has been appointed Medical Officer for the Hanmer District of the Ellesmere Union, Salop.

BRAYN, R., L.R.C.P.L., M.R.C.S.E., has been appointed Assistant Medical Officer to H.M.'s Convict Prison, Portsmouth, vice Brietzche, appointed to H.M.'s Convict Prison, Millbank.

BUNCOMBE, C. H., F.R.C.S.E., has been appointed Medical Officer for the City of London Union Infirmary at Bow.

CHAMPNEYS, F. H., M.R.C.P., has been appointed Medical Registrar to St. Bartholomew's Hospital, vice Hollis, resigned.

CLAY, G. L., M.R.C.S.E., has been appointed a Medical Officer to the Cannon-street Male Adult Provident Institution, Birmingham.

CROCKER, H. E., M.B., B.Sc., L.R.C.P.L., M.R.C.S.E., has been appointed Resident Medical Officer of University College Hospital, vice Meredith, resigned.

FRY, J. F., M.R.C.S.E., L.R.C.P.L., has been appointed a House-Physician to Guy's Hospital.

GARSTANG, W. M.D., M.R.C.P.L., has been appointed a Physician to the Blackburn and East Lancashire Infirmary, vice Morley, resigned.

GODFREY, T., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for No. 1 District and the Workhouse of the Mansfield Union, vice Cooper, resigned.

GREENING, F. J., M.R.C.S.E., has been appointed Surgeon to the Dispensary, Ryde, Isle of Wight, vice Wilmot, deceased.

GWYNN, E., M.D., M.R.C.S.E., has been appointed a Medical Officer to the Hampstead Provident Dispensary.

HADLEY, G. P., M.D., M.R.C.S.E., has been appointed a Medical Officer to the Cannon-street Male Adult Provident Institution, Birmingham.

HALL, F. DE H., M.D., M.R.C.P.L., has been appointed a Casualty Physician to St. Bartholomew's Hospital, vice Hollis, resigned.

HEATON, Mr. C. W., Professor of Chemistry in the Medical School of Charing-cross Hospital, has been appointed Public Analyst to the District of Milton in Kent.

HICKINBOTHAM, J., M.D., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed a Medical Officer to the Cannon-street Male Adult Provident Institution, Birmingham.

HILLES, Mr. J. E., has been appointed Assistant Resident Medical Officer to the Kilburn Dispensary, vice Cambell, whose appointment has expired.

HUNT, J., M.R.C.S.E., has been appointed a Medical Officer to the Cannon-street Male Adult Provident Institution, Birmingham.

JONES, C. M., M.R.C.S.E., L.M., has been appointed Resident Accoucheur to St. Thomas's Hospital.

JONES, J. F., M.R.C.S.E., has been appointed a Medical Officer to the Cannon-street Male Adult Provident Institution, Birmingham.

LEWIS, Dr. B., has been appointed Clinical Assistant to the West Riding Lunatic Asylum, Wakefield, vice Watson, resigned.

LINGARD, A., M.R.C.S.E., has been reappointed a House-Physician to St. Thomas's Hospital.

LORD, C. F. J., M.R.C.S.E., has been appointed Consulting Surgeon to the Hampstead Provident Dispensary.

MELLER, C. M., M.D., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Fylingdales District of the Whitby Union, vice Lightbody, resigned.

MOORE, N., M.B., M.R.C.P.L., has been appointed a Casualty Physician to St. Bartholomew's Hospital, vice Brunton, appointed an Assistant-Physician.

NEWBY, C. H., M.R.C.S.E., L.R.C.P.L., has been appointed a House-Physician to St. Thomas's Hospital.

PITTS, Mr. B., has been appointed Physician's Assistant at the Bethlem Royal Hospital for Lunatics, vice Beach, appointed Medical Superintendent of the Claptou Asylum for Idiots.

PUGH, J. H., L.S.A.L., has been appointed a Medical Officer to the Cannon-street Male Adult Provident Institution, Birmingham.

RAVENHILL, T. H., M.R.C.S.E., has been appointed a Medical Officer to the Cannon-street Male Adult Provident Institution, Birmingham.

REED, H. W., M.D., M.R.C.S.E., has been appointed a Medical Officer to the Hampstead Provident Dispensary.

RICHMOND, S., M.D., M.R.C.S.E., has been appointed Medical Officer of Health for the Northallerton Urban Sanitary District, vice Peacock, resigned: £20 per annum; acreage 90; population 2663.

RIGBY, J. M., L.R.C.P.I., M.R.C.S.E., has been appointed Medical Officer of Health for the Chorley Rural Sanitary District: £150 for one year; acreage 43,663; population 18,175.

RING, J., M.D., M.R.C.S.E., has been appointed Medical Officer for the Willesden District of the Hendon Union, vice Mullar, resigned.

SECCOMBE, G. S., L.R.C.P.L., M.R.C.S.E., has been appointed Assistant Medical Officer to the Metropolitan Asylum District Asylum for Lunatics, Caterham, vice Younger, appointed Apothecary to the Middlesex Lunatic Asylum, Hanwell.

SHAW, J., M.R.C.S.E., has been appointed a Medical Officer to the Cannon-street Male Adult Provident Institution, Birmingham.

SHEARER, G., M.D., has been appointed a Medical Officer to the North Dispensary, Liverpool.

SMITH, R. W., L.R.C.P.I., M.R.C.S.E., has been appointed a Medical Officer to the Cannon-street Male Adult Provident Institution, Birmingham.

SMITH, S. J., M.D., L.R.C.S.Ed., L.M., has been appointed a Medical Officer to the Cannon-street Male Adult Provident Institution, Birmingham.

STEELE, J. W., M.D., has been appointed a Medical Officer to the East Dispensary, Liverpool.

TATTERSALL, W., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer of Health for the Little Woolton Urban Sanitary District: £20 per annum; acreage 1450; population 2460.

WHITE, E., M.D., M.R.C.S.E., has been appointed a Medical Officer to the Cannon-street Male Adult Provident Institution, Birmingham.

WILLIAMS, H. D., M.R.C.S.E., L.R.C.P.L., has been appointed a House Surgeon to Guy's Hospital.

WORGER, T. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Radstock Urban Sanitary District: £20 per annum; acreage 1000; population 2651.

Births, Marriages, and Deaths.

BIRTHS.

ASBURY.—On the 3rd inst., at Cheshunt, the wife of Chas. John Asbury L.R.C.P.Ed., late of Broxbourne, of a daughter.

ATKINSON.—On the 5th inst., at Ashford, Kent, the wife of Charles S. A. Atkinson, M.R.C.S., of a son.

BELLAMY.—On the 8th inst., at Margaret-street, Cavendish-square, the wife of Edward Bellamy, F.R.C.S., of a son.

CUNNINGHAM.—On the 3rd inst., at Campbeltown, Argyleshire, the wife of John Cunningham, M.B., of a daughter.

EVANS.—On the 5th inst., at Drumcree Cottage, Westmeath, the wife of U. W. Evans, M.D., Deputy Inspector-General Army, on half-pay, of a daughter.

RODMAN.—On the 8th inst., at Gloucester-street, Glasgow, the wife of Robt. Rodman, M.B., C.M., of a daughter.

SMITH.—On the 6th inst., at Park-place, Cheltenham, the wife of F. A. A. Smith, M.D., of a son.

MARRIAGES.

GIBBON—TAYLOR.—On the 4th inst., at St. Mary's Church, Donnybrook, Dublin, Surgeon-Major Edward Acton Gibbon, A.M.D., eldest son of Wm. Monk Gibbon, Esq., LL.D., to Eliza Rebecca (Birdie), second daughter of Thos. H. Taylor, Esq., of the Chief Secretary's Office, Dublin Castle, and Wellington-road.

LEE—SHAW.—On the 25th ult., at St. James's Church, Slaithwaite, Francis Boynton Lee, M.R.C.P., F.A.S.L., of The Elms, Heckmondwike, to Anna Marie, daughter of Richard Shaw, Esq., of Broadfield House, Slaithwaite.—No Cards.

SLATER—RAWLINGS.—On the 4th inst., at Birmingham, John S. Slater, M.R.C.S., of Evesham, to Lydia Mary Rawlings, of Edgbaston, Birmingham.

DEATHS.

BARTER.—On the 27th ult., Thos. Barter, M.R.C.S.E., of Gay-street, Bath, aged 70.

CRUMMACK.—On the 24th ult., Henry Crummack, M.R.C.S.E., of Micklegate, York.

DENNY.—On the 6th inst., John Denny, L.R.C.P.Ed., of Summer-terrace, Brompton, aged 43.

HENTIG.—On the 7th of Dec. last, at Tamworth, New South Wales, Henry Wm. Hentig, Surgeon, aged 53.

JONES.—On the 8th inst., at Eastbourne, Surgeon-Major Juxon H. Jones, late H.E.I.Co.'s Service.

MURLEY.—On the 28th ult., Stephen H. Murley, M.R.C.S.E., of Cheltenham, aged 88.

STENHOUSE.—On the 9th inst., Alexander Stenhouse, M.D., of Dunfermline.

WILLIAMS.—On the 1st inst., John Williams, M.R.C.S.E., of Talarfon, aged 79.

[N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.]

METEOROLOGICAL READINGS

(Taken by Steward's Instruments).

THE LANCET OFFICE, MARCH 11TH, 1875.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 8 A.M.
Mar. 5	29·99	E.	...	32	...	46	31	0·25	Overcast
„ 6	29·77	E.	38	40	...	52	31	0·19	Overcast
„ 7	29·84	S.W.	49	52	...	57	39	...	Cloudy
„ 8	30·01	W.	52	53	...	58	51	...	Overcast
„ 9	29·85	W.	50	53	...	56	51	...	Cloudy
„ 10	30·42	S.E.	38	40	...	51	37	...	Overcast
„ 11	30·27	E.	35	38	...	...	34	...	Fine

Notes, Short Comments, and Answers to Correspondents.

ARMY RECRUITS.

THE discussion of this subject reminds one very much of the ringing of a bell. The same statements are made and met in the same way, and the same arguments are brought forward again and again. If the recruits are not everything that could be desired, they are the best that can be got; and if the nation is willing to bear the expense of feeding and training them whilst their frames are maturing, a considerable proportion of their number at any rate turn out well, and some of the boy recruits, of whom Mr. Holms said a policeman could carry one under either arm, develop in process of time into average-sized soldiers. Mr. Gathorne Hardy, as a man of fine physique himself, has a good standard to go by, and he has personally inspected a large number of recruits and young soldiers at Aldershot, with the results that he detailed in his speech. It always strikes us that there is no real basis of comparison between this and continental nations. They have a system of enforced military service; ours is voluntary. They have few or no colonial possessions; we have a great many. With no sea to divide Germany from France, the people of both countries can realise the importance of being always ready to "hold their own" against attacks which may come at any time, and yet the system of enforced military service and the continual interference of the State with the liberty of the subject are felt to be so intolerable that shoals of Germans emigrate. If the voluntary system is to be maintained in this country, we must be prepared to pay, and pay pretty heavily too, for the necessary number of men to keep up our army. Mr. Hardy is wise, we think, to turn his attention in the first place to the non-commissioned ranks of our army. There are many people in this country who believe, however, that we are steadily drifting in one direction—that of compulsory service in some shape or other. Until that time come, if it ever do, the Government should, in our opinion, encourage service in the volunteer corps. A man who has learnt to shoot with a rifle and to march is a better man than one who has not, and what Cromwell did years ago, and the Americans did comparatively recently, might surely be done again. There is material enough yet in Great Britain to make a force to resist invasion; but seeing that warfare is now a very scientific kind of work, we must inevitably keep up a large body of well-trained and disciplined regulars.

Mr. Blake is thanked; but we are unable to avail ourselves of his kindness.

SHIP-SURGEONS.

To the Editor of THE LANCET.

SIR,—I wish to bring before your notice the fact that there are unqualified persons serving on board British merchant vessels as surgeons, contrary to the Act in that case made and provided, whether as to passengers or crew. Furthermore, there are persons serving on board these ships as surgeons whose names do not appear in the Red-book or Medical List, published annually by the Board of Trade (with a half-yearly Supplement); and unless these surgeons are inserted as recognised by the Board of Trade, they can neither sign a certificate, nor are they entitled to one. Are there no remedial measures for this abuse? Surely the Shipping Master, whose duty it is to see that all masters, mates, and engineers have their certificates required by law, should also require the production of the surgeon's diploma. You may say, and in a logical sequence, that the Board of Trade should keep the law alive in this matter; but if you venture to suppose that the Board of Trade will do its duty, I can only say you will find yourself very much mistaken. I affirm that there are youths of from 18 to 21 serving as surgeons, also foreigners without diplomas, on board such British ships as are required by law to carry "surgeons."

Yours &c.,

March 10th, 1875. A MASTER MARINER OF 1843.

AN AGREEABLE WAY OF TAKING CASTOR OIL.

A CORRESPONDENT makes the following suggestion:—Take an orange, and divide it into two equal parts; squeeze the juice of one half into a cup, pour the oil upon it; then squeeze the juice of the other half very gently on the oil. By swallowing the whole cautiously not the least taste of the oil is experienced.

Enquirens should address his communication to the gentleman in question, who is alone able to supply the desired information.

Mr. Taylor, (Stroud.)—Mr. Eassie's book on Cremation.

EMIGRATION OF PAUPER CHILDREN.

FROM the report of Mr. Doyle, it would appear that there are many and grave defects in the arrangements connected with the transport of the destitute girls sent out to Canada under the auspices of Miss Rye and Miss Macpherson. The condition of the young people in the "homes" provided for them in the Dominion, and from which they are dispersed to their several situations, is not, it is stated, by any means unexceptionable. The great evil that cries aloud for a remedy would appear to be the want of proper supervision and control of the girls both before and after they are sent to the situations provided for them. Everyone must desire that the benevolent intention of the two ladies above mentioned in their emigration scheme should not fall of realisation on account of the absence of those complete arrangements necessary to the success of any enterprise like that which they have so generously undertaken.

A Puzzled Student.—We have answered the question put to us so many times that we must refer our correspondent to back numbers of THE LANCET.

Mr. Norwell.—The south or south-west of England.

AN APPEAL.

To the Editor of THE LANCET.

SIR,—Mr. Merryweather, M.R.C.S., L.S.A., of 14, Colville-road, Bayswater, had suffered from several attacks of acute rheumatism, which left him with disease of the heart and other serious results. Having a wife and five children to provide for, he very often followed his professional duties in much suffering, and when rest was essential for his personal welfare. But his health failing still more seriously, he became unable to continue his work at all regularly, and his practice, of course, greatly diminished, so that after his decease (and he died literally in harness, for he had visited, though with much difficulty, a patient within two hours of his death) it was found that his assets were barely sufficient to meet his liabilities, and to pay the expenses of his funeral. It is very probable, indeed, that his anxieties respecting his pecuniary position still further undermined his constitution and accelerated his death, which took place on the 11th of last month. His widow is a thorough lady, of high-class education and of great energy of character, and, if enabled to commence a school, has full confidence in being able to provide for herself and her children. Some friends of her late husband and of herself, well knowing these circumstances, and feeling sure that the case is one of the best kind—that of a widow striving to help herself, and to bring up her children as her husband would have wished,—desire to raise a Fund to enable Mrs. Merryweather to take a house for the purpose named, for the duties of which she is fully qualified, having been similarly engaged previously to her marriage. They feel certain that aid now given will not only be of temporary use, but of *permanent* value.

The case has been examined by the Committee of the British Medical Benevolent Fund, and they have, under the special circumstances, made to the proposed Fund the unusually large grant mentioned below.

As I am thoroughly sure that in this instance gifts will be well bestowed, I shall have much pleasure in receiving and acknowledging any donations which may be kindly contributed to this Fund, as will also Dr. Atwood, of 129, Ladbroke-grove, Notting-hill, London, W.; and thanking you very much for allowing this appeal to appear in your pages,

I am, Sir, yours very faithfully,
CHARLES J. HARE, M.D. Cantab., F.R.C.P.

57, Brook-street, Grosvenor-square, W., March 8th, 1875.

The following contributions have already been received:—

British Medical Benevolent Fund...	£20	0	0
Edwin Dalton, Esq., Devonshire-road, Balham...	10	0	0
W. A. Atwood, Esq., L.K.Q.C.P.	5	5	0
Mrs. Robertson	0	10	0
Mrs. Mason	0	10	0
J. P. Holmes, Esq.	0	5	0
Mrs. Favarger	0	10	0
C. G. Lewis, Esq., Charlotte-st., Portland-place .	1	1	0
W. H. Gardner, Esq., F.R.C.S., Gloucester-terrace, Hyde-park	1	1	0
Richd. James, Esq., M.R.C.S., Clarendon-road, W.	2	2	0
Captain M., R.N....	0	10	0
Henry Venning, Esq., Shepherd's-bush, W.... ...	0	10	0
E. Symes Thompson, M.D., F.R.C.P.	1	1	0
Rev. Geo. Braithwaite, Yealand Conyers, Carnforth, Westmoreland	10	0	0
Charles J. Hare, M.D.	10	10	0

L.R.C.P.—It is a point of honour, in regard to which honourable feeling should be the guide. It would be very ungracious, after having been introduced in the capacity of an assistant to the patients of an old practitioner, to commence practice in the same town without the sanction or permission of the principal.

Mr. Lawrence Gill.—The procedure was discussed at length some months ago in our pages, and we cannot do better than refer our correspondent to the numerous letters on the subject which we published at the time.

Applie should consult our advertising columns.

CERTIFICATES OF DEATH.

To the Editor of THE LANCET.

SIR,—Under the present Registration Act the officers are required to insert the name and the initials of the qualifications of the certifying medical man. Would you call the attention of the medical profession to the necessity of signing their names &c. in such a legible manner that the registrars may do this duty efficiently. I am constantly receiving certificates which require an expert to decipher. As the clause in the Act is one eminently calculated to protect the profession from unauthorised practitioners, in complying with this request they are helping themselves.

Your obedient servant,
March, 1875. A REGISTRAR.

A RARE FŒTUS.

AT a meeting of the Pathological Society of Dublin, held on the 6th inst., Dr. Kidd, Obstetric Surgeon to the Coombe Hospital, exhibited an example of a rare kind of monster, which has been described by Geoffroy St. Hilaire under the appellation of sympodium. It was a fœtus about seven months old, and presented the following peculiarities:—Both lower extremities were intimately connected in the mesian line as far down as the heels; there were no genital organs; scarcely the rudiment of a bladder; no rectum or anus. The kidneys were absent; but two bodies were present, which might have been the Wolffian bodies. There was but one umbilical artery, apparently a continuation from the aorta. This is the first instance of this particular kind of monster which has occurred at the Coombe Lying-in Hospital; but in the College of Surgeons Museum at Dublin there is a similar example which a Dr. John Stokes presented in 1832. It may be mentioned that this was the mother's fifth child, she having aborted with the first, third, and fourth children.

Dr. E. Diver.—We have received the communication, and it shall be kept in mind.

ARMY MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—I should think anything more unsatisfactory than the present state of the Army Medical Department it would be difficult to conceive. Everything is simply chaos and discontent since the promulgation of the Warrant of 1873. In India, for instance, the state of affairs is truly ridiculous. In one regiment at this time in the Bombay Presidency there are no less than three surgeon-majors doing duty—an expensive arrangement, to say the least of it,—each drawing over £32 a month; whilst, on the other hand, surgeons (our old assistant-surgeons) hold regimental charges, whilst the surgeon-major is doing assistant-surgeon's duties. Why is a surgeon promoted to the rank and position of a surgeon-major now-a-days? It seems surely unnecessary when he has to perform the same subordinate duties which he did before he was promoted. Where is his ambition now, I would ask? Simply nowhere. His long looked-for promotion, when it does come, leaves him very much in the same position as he was before. Can the powers that be mean this? I doubt it much. Again, the medical officer of the present day is nobody's child, but merely a necessary evil, being attached to a regiment, which he does not know, for medical purposes only. What possible interest can he have in that regiment where he is held only on sufferance? None. I contend, if he is a conscientious medical man, he will do his duty to the sick faithfully and bravely when required, as all medical officers of Her Majesty's service have done. But why deprive him of the honour and pleasure of putting the number of his regiment on his card? Does it stand to reason because a man is a doctor that he has less pride in his regiment than a combatant officer? Certainly not. A good regimental medical officer, as of old, was one of the mainstays of a regiment. Ask any colonel commanding, and he will answer strongly in the affirmative; besides, the soldier knew him, and he knew the soldier—a great point in the efficiency of a battalion. Ask the adjutant. Again, the soldier's wife knew him, and so did the soldier's child; his kindly manner and sympathy in illness often cheered the poor woman and her children; they used to call him "our doctor." Do they so now? No, because they may have a strange doctor every month, and one who knows nothing about them. It is high time something was done to remedy this chaotic state of affairs; not only for the benefit of the service, but to put an end to the disgust and discontent of the Army Medical Department generally.

I remain, Sir, yours truly,
Bombay, Feb. 5th, 1875. A VOICE FROM INDIA.

NELL GWYN'S MEDICAL ACCOUNT.

AMONG the many curious manuscripts recently discovered on the shelves of Messrs. Child and Co. in the upper room over Temple-bar—all the contents of which carry one back into the far past—was one of Nell Gwyn's doctor's bills. The document runs as follows:—

"Received by the hand of Mr. Child the summe of one hondert and nine pound yn full of all remedes and medecins delivered to Mrs. Ellin Gwyn, deceased, I say received by me this 17 of November, 1688; Christianus Harell, £109..00„00.."

Considering what this sum represented in those days, we are bound to say that the worthy Harell charged handsomely for his medical services. The money probably came out of James the Second's pocket, who had promised the late King to look after Mistress Nell.

G.—We think our correspondent had better advertise, as it would be invidious to recommend a particular gentleman.

Mr. Stoney.—Yes.

SHIPS AND SEAMEN.

To the Editor of THE LANCET.

SIR,—I have read with much interest your articles on Ships and Seamen. Would it not be beneficial if some plan were adopted to wash out the holds of vessels periodically, especially of those carrying passengers? Water could be introduced by means of a pipe by the side of the pumps, which, by being contrived as a syphon, could supply the necessary amount without much labour, and without danger from leakage.

Of the crews of merchant vessels, it is undoubtedly necessary that the officers should be in good health, so as to be capable of that vigilance upon which so much depends. With regard to that class of vessels which carry only two officers on long voyages, my impression is that they are often overworked. Four hours on and four hours off, day and night, for months together is pretty trying; but in point of fact they do not get the twelve hours off, as they are often expected to be the best men on board as well as officers—that is to say, to be hard-working operatives, and, after working hard for a considerable portion of the day, to be wakeful and watchful at night. The remedy would be in carrying an additional officer competent to take charge of a watch, in allowing all officers more time for studying the scientific branches of their profession, and in having seamen competent to work with less assistance from their officers.

Your obedient servant,
March, 1875. LAM. ALEPH.

REVACCINATION OF MEDICAL STUDENTS.

A HOUSE-SURGEON to one of the Paris hospitals died a short time ago of small-pox contracted in the discharge of his duties. He was a very promising young student, and his untimely death was universally deplored. Several hospital physicians and surgeons, struck by this sad event, have determined to request all medical students to submit to revaccination, and to make the operation a general rule for all the young men entering upon hospital practice. We perceive that a great many students have already been revaccinated. Great credit is due to M. Ernest Besnier for having been the principal advocate of this movement. We leave it to the authorities of London or provincial hospitals to decide whether this example should be imitated. It should, however, be observed that in Paris no special fever or small-pox hospitals are to be found.

Dr. J. W. Cook.—We are not aware of the existence of a binding law. The guardians have a certain discretionary power of appointing men with only one qualification.

A General Practitioner.—Medical men must use their own judgment as to giving certificates of the cause of death.

INFLUENCE OF MATERNAL IMPRESSIONS ON THE FŒTUS.

To the Editor of THE LANCET.

SIR,—The following case may be of interest to those gentlemen who have been lately recording somewhat similar cases in your columns.

A patient of mine during the early period of utero-gestation had the misfortune to get her right hand trapped by the slamming of a door, being caught across the metacarpo-phalangeal joints of the *right* hand. The injury caused her severe pain at the time, but it soon subsided. She was delivered at the full time of a healthy girl, normal in every respect, excepting the fingers of the *right* hand. These were normal in number and in position, but arrested in development.

At the present time the child is over two years of age. The thumb and palm of the hand are quite natural; but the fingers measure only about half an inch in length, and are apparently without bones.

I give you the facts as far as I have ascertained, and leave your readers to form their own opinion as to whether the abnormality in the child had any connexion with the accident to the mother.

In those cases in which the supposed influence has acted early in gestation it will not be easy to determine with certainty if such influence has really produced that abnormal condition, as it is evident that any influence affecting development will be more potent during the early life of the embryo. But when the supposed influence has acted at a late period of gestation, in those cases in which development is abnormal, a consideration of the condition of the fœtus at that particular period would enable us at least to determine whether the deformity had *not* been caused by the maternal influence—e. g., in my own case, if the accident had happened at the eighth month of gestation, when the fingers were fully formed, there could have been no doubt in concluding that the accident to the mother had *not* caused the malformation in the child. By pursuing this method in a number of cases, some more certain law might be laid down than there appears to be at the present time for determining the extent to which maternal impressions influence the production of malformations in the fœtus.

I am, Sir, yours &c.,

Workington, March 5th, 1875. F. ORMROD.

SHELTER HUTS FOR CABMEN.

A MEETING has been recently held for the purpose of establishing in Dublin shelters for the car and cabmen of that city. They have proved very successful in London, Bristol, Birmingham, &c., the object being not only to protect the drivers of vehicles from the inclemency of the weather, but also to afford something in the way of fire, light, and provision for cooking food, including tea, coffee, &c. The men will have the right of being admitted to the sheds free of charge, where they can obtain refreshments for a trifle over the cost price.

JABORANDI.

To the Editor of THE LANCET.

SIR,—In answer to Mr. A. Roberts's questions on the clinical uses of jaborandi, I would state that after a full dose of the drug has been given, when the diaphoresis and salivation are beginning to abate, a stage of depression supervenes, which, in some cases very slight, is in others very well marked, though I have never seen it at all alarming. When most severe, this depression completely passes off in two or three hours. These facts were noticed in the article on Jaborandi in your issue of Jan. 30th.

The results of the experiments that have thus far been recorded render it extremely probable that jaborandi would reduce the temperature in fever; the only reported case bearing on this point is one published by Dr. F. Riegel in the *Berliner Klinische Wochenschrift*, Feb. 8th and 15th, 1875, where the temperature, which was 101° before the experiment, fell during the sweating stage.

I know of no instance where jaborandi has been given in a case of cardiac dropsy. Mr. J. N. Langley records some very interesting observations on its physiological action on the frog's heart in the *British Medical Journal* of Feb. 20th.

Your obedient servant,

University College Hospital, Feb. 1875. A. PEARCE GOULD, M.B.

To the Editor of THE LANCET.

SIR,—I find that jaborandi has been known as a drug for at least two centuries. The Hon. Robert Boyle, one of the founders of the Royal Society, in one of his works, in speaking about the action of specifics, quotes from the Travels of Dr. Piso, who says: "I saw divers, as it were, in an instant redeemed from death by the eating of venomous mushrooms and other unwholesome things, only by drinking a recent infusion of the root of jaborand." Dr. Piso was a South American traveller, so that from his account jaborand, or jaborandi, must have been known to the natives of that country probably for some time before he visited them, which I believe was about 1640.

Yours truly,

Darlington, March 2nd, 1875. W. EARBY.

COOL.

PUBLIC benefactors have not seldom occasion to regret a want of appreciation of their efforts on the part of those they are desirous of benefiting. But it is not often that one of that estimable class of people has more reason to complain of a cold reception of a munificent offer than has Mr. Bennett, of Liverpool. This gentleman lately generously proffered £1000 to defray the cost of testing what further supply of water may be calculated upon by sinking large holes in the soil in the immediate neighbourhood of Liverpool. The Water Committee of the town, in acknowledging the gift, tender their "best thanks" to the donor, and coolly suggest that he had better appoint his own engineer to carry out his plan, promising at the same time to give that official every assistance in their power that does not involve the Corporation in expense.

Anæsthetic.—Richardson's ether inhaler. Any of the pamphlets which have been published on the subject.

WHITE SOFT SILK WASTE AS AN AGENT FOR REMOVING FOREIGN BODIES (FIXED AND FLOATING) FROM THE CONJUNCTIVA AND CORNEA.

To the Editor of THE LANCET.

SIR,—In consequence of the difficulty I experienced in removing from a patient a portion of steel deeply imbedded in the cornea, which did not yield to spud or needle, some other means for its removal became necessary. Dry, white soft silk waste suggested itself to me, and was wound round a thin piece of wood, so as completely to envelope its end. This soft application was then brushed once backwards and forwards horizontally over the part of cornea where the foreign body remained fixed. To my astonishment it was at once entangled by the delicate but strong meshes of the silk, and was withdrawn with the greatest ease, caught by the same. Seeing no books (which I have consulted) mention this application, and feeling sure it is one of great value in removing foreign bodies fixed or floating in the conjunctiva or cornea, it seems to me a simple but valuable invention. The following case illustrates well its use.

A gentleman, in turning steel at a lathe, suddenly felt that a portion had entered his eye. He went at once to a surgeon, who with the most skilful manipulation failed to extract the same, saying it would soon work out of itself. The next morning the patient saw me (the conjunctiva being much congested, more especially the vessels running towards that portion of cornea containing the steel, the patient having suffered also severely since the accident), and on the first application the portion of steel was extracted.

I have since had numerous cases, which were treated by the same method, and with the same instantaneous relief.

I remain, Sir, yours truly,

Congleton, March 3rd, 1875. A. B. CROWTHER, M.R.C.S., &c.

PROVIDENT DISPENSARIES.

To the Editor of THE LANCET.

SIR,—The Governors of Scarborough Dispensary, of which I am house-surgeon, are considering the advisability of charging each patient a small sum on admission. Can any of your readers kindly give me particulars of similar institutions, and of the mode in which the funds so raised are applied? I shall be greatly obliged for any reports or rules of provident dispensaries.

Yours truly,

Scarborough, March 9th, 1875. J. A. CALANTARIENTS.

THE DAVEY DEFENCE FUND.

FURTHER contributions received on behalf of the above Fund:—

Amount previously announced... ... £651 5 6

Dr. Sutton	£3	3	0	Dr. T. Winsor, Manchester	£1	1	0
A. P. Fiddian, Esq., Cardiff	1	1	0	E. J. Cullingworth, Esq., Manchester	1	1	0
Dr. Drew, Cornwall	2	2	0	Dr. H. Gabb, Hastings ...	1	1	0
Dr. E. L. Fenn, Richmond.	1	1	0	J. P. Harris, Esq., Liverpool	1	1	0
E. C. Greenly, Bristol ...	0	10	0	B. T. Grubb, Esq., Harlow.	1	1	0
Dr. Eade, Norwich	1	1	0	Dr. C. M. Heimes, Mangotsfield	0	10	0
S. Haynes, Esq., Stanstead	0	5	0	Dr. G. E. Herman	1	1	0
Dr. Graham, Epsom	0	10	0	Dr. W. H. Folke, Hanley...	1	1	0
J. G., Hampton	2	2	0	Dr. F. R. P. Darke, Salisbury	1	1	0
Dr. Gibb, Newcastle-on-Tyne	0	10	6	Dr. E. Dever, Croydon ...	0	5	0
Dr. Banks Hay, Hull... ...	0	10	6	W. J. Harris, Esq., Worthing	2	2	0
H. J. Hawthorn, Esq., Ecclesfield	1	1	0	Dr. Baines	0	10	6
Dr. A. Hamilton, Windermere	1	1	0	H. George, Esq., Lincolnshire	0	5	0
Dr. Gray, Oxford...	1	1	0				

Enquirer.—The waters of Mont Dore (Puy-de-Dôme) are similar to those of Neuenahr, but contain only about half the amount of carbonate of soda and more chloride of sodium; hence may be regarded as muriated alkaline waters. They would, no doubt, be beneficial in cases of psoriasis occurring in connexion with marked acid dyspepsia and a gouty tendency. The waters, however, of Mont Dore are held in reputation chiefly for chronic catarrh and rheumatism.

A Subscriber.—£400 or £500. Much would depend on the kind of introduction.

SIZE OF INFANTS AT BIRTH.

To the Editor of THE LANCET.

SIR,—Permit me to inquire, through your columns, of your obstetrical readers if any statistics of the weight, length, and chest girth of *English* infants at birth exist other than those of Dr. Clark's in the 76th volume of the "Philosophical Transactions" (which refer only to weight)?

I am, Sir, yours &c.,

Bolton-row, Mayfair, March 11th, 1875. CHARLES ROBERTS.

HEREDITY.

To the Editor of THE LANCET.

SIR,—Can any of your readers refer me to any work of authority from which I can derive information as to the relation between disease in the parent and the moral character of his descendants?—Yours truly,

March 9th, 1875. S. S.

A LIVING LIE.

To the Editor of THE LANCET.

SIR,—Some few weeks ago I inserted an anonymous advertisement in your columns, stating my desire to read privately with pupils in London. Among other replies I received one which I at once returned to the writer, telling him in an unsigned letter that his communication was unintelligible, and written apparently without any reference to the wording of my advertisement. A week has elapsed, and I have now received a second letter, which I here transcribe:—

"My letter of the 24th was to this effect. If you will present yourself in my room and stead before the Board of Examiners at the Royal College of Physicians, Edinburgh, and then and there to secure L.R.C.P. degree by passing the *first* and *second* professional examinations for me, comprising—

Anatomy, Physiology, Chemistry, } First half.

Materia Medica, Practice of Medicine, Midwifery, Medical Jurisprudence, Clinical Medicine, } Second half.

"For passing the above I will give the sum of £50, exclusive of all other expenses attending the journey. If convenient for you, will ask for a special exam., and will be happy to pay the £50 to you at any moment."

I have been in some doubt whether I should pay any regard to the thickly underlined *private and strictly confidential* with which the writer screens his monstrous proposal and his name. There is no fear that he will himself ever pass a professional examination. Although the step is to me unpleasant, it only seems my duty to ask you, by giving a prominent place to this letter, to expose a system of which this cannot be an isolated example, thereby warning examining bodies to be more on the watch to discover and severely punish anyone who attempts to carry out so gross a fraud.

Personal reasons compel me to withhold my name from your general readers; but it is in your hands should the Edinburgh College of Physicians desire to know who is, Sir,

Your obedient servant,

London, March 8th, 1875. A GRADUATE OF CAMBRIDGE.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from — Prof. Lister; Mr. Berkeley Hill, London; Dr. Thudicham, London; Mr. Barwell, London; Mr. Bader, London; Dr. Hare, London; Mr. Lawson Tait, Birmingham; Dr. C. Theodore Williams, London; Sir Duncan Gibb, London; Mr. P. Teale, Leeds; Dr. Milne, Edinburgh; Dr. Fox, London; Sir Charles Trevelyan, London; Dr. Ross, Waterfoot; Mr. Musgrave, London; Dr. Downe, London; Mr. Taylor, Stroud; Mr. Attenburrow, Jersey; Mr. Cheshire, Birmingham; Mr. Gill, Bow-road; Dr. Greenfield, London; Mr. Sewill, London; Dr. Gould, London; Dr. Moxon, London; Mr. Ormrod; Dr. Monckton, Maidstone; Mr. Wilkinson, Brighton; Dr. Kebbell, Brighton; Dr. Cook, Manningtree; Mr. Maunder, London; Mr. Baines, London; Mr. Armstrong, Newcastle; Mr. Gardner, London; Mr. Greaves; Mr. M'Adam; Mr. Blake, Dublin; Mr. Ford; Mr. Camden, Rhyl; Mr. Poole, London; Mr. Wolverson; Mr. S. Knott, London; Mr. Norton, London; Mr. B. Barnes, London; Messrs. Schnider and Co., London; Mr. Ward, Leeds; Dr. Taylor, Guildford; Dr. R. Harvey, Aberdeen; Mr. Lucey, Glenbrook; Mr. C. Sprague, London; Mr. Dougall, Glasgow; Mr. West, Stoke-on-Trent; Messrs. G. Barker and Co., London; Dr. Stephenson, Hull; Messrs. Burgess and Willows, London; Mr. Fox, Bristol; Mr. Macpherson, Chichester; Mr. Norwell, Birmingham; Mrs. Freandlich, London; Messrs. Richardson and Co., Leicester; Dr. Warman, Trenton, New Jersey; Messrs. Spicer Brothers, London; Mr. Angus, Tonbridge; Mr. Underhill, Wolverhampton, Dr. Underwood, Boston, U.S.A.; Mr. Reilly, Hackney; Mr. Farrant, London; Mr. Tandy, Birkenhead; Mr. Prestwich, Oldham; Dr. Thomson, Southall; Mr. Bond, West Bromwich; Mr. Ogden, Manchester; Mr. Buckland, London; Mr. S. F. Solly, London; Royal Institution; Enquirer; Surgeon; M.D.; Room for All; Querens; M. A. B.; A Master Mariner; Applic; Senex; A Puzzled Student; G.; Anæsthetic; F.R.C.P.; A Registrar; M.R.C.S.; L.M.; A Graduate of Cambridge; Anti-Humbug; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from — Mr. Moore, Skelmersdale; Mr. Thomas, Brockley; Mr. Wye, Liverpool; Mr. Atkins, Dover; Mr. Carnack, Willenhall; Mr. Hargreaves, Burnley; Mr. Gordon, Boxford; Mr. Newington, Goudhurst; Mr. Clutterbuck, St. Mary's Cray; Mrs. Bishop, Banbury; Mr. Daly, Lewisham; Mr. Ward, Norwich; Dr. Wood, Cranbrook; Mr. Holmes, Slough; Messrs. Beaman & Johnston, Wigan; Mr. Kelly, Southgate; Mr. Mackenzie, Normanton; Mrs. Leete, St. Leonards; Mr. Hodgson, St. Helens; Mr. Earlam, Abbots Bromley; Mr. Sowter, Upper Norwood; Mr. Jenkins, Oxford; Mr. Tothill, Topsham; Dr. Merryweather, Guisborough; Mr. White, Bayswater; Mr. Evershed, Arundel; Mr. Butters, Laymore; Mr. Pugh, Brighouse; Mr. Redfern, Ventnor; Mr. Clark, Farnham; Mr. Purves, Edinburgh; Mr. Tweed, Lincoln; Mr. Jenkins, Worcester; Mr. Stoney, Millow; Mr. Roberson, West Buckingham; Mr. Worger, Radstock; Mr. Ledwich, Leicester; Mr. White, Kensington; Mr. Wright, Newmarket; Dr. Anderson, Bow; Dr. Leggatt, Eastry; Mr. Molyneux, Wigan; Messrs. Horsfall & Whiteley, Wakefield; Mr. Wright, Edinburgh.

Liverpool Daily Post, Argyleshire Herald, Manchester Guardian, Western Morning News, Cork Constitution, Welshman, Colonies, Liverpool Courier, Hastings and St. Leonard's Observer, North British Daily Mail, Newark Advertiser, Huddersfield Daily Chronicle, East London Observer, Sussex Daily News, Surrey Advertiser, Cambridge Express, Isle of Man Times, Birmingham Daily Post, and *Nottingham Daily Guardian* have been received.

Medical Diary for the ensuing Week.

Monday, March 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND. — 4 P.M. Prof. W. K. Parker, "On the Structure and Development of the Skull."
MEDICAL SOCIETY OF LONDON.—8 P.M. The President's Address.—Dr. Jagielski, "On Spirometry," illustrated by a New Instrument.

Tuesday, March 16.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. A. H. Garrod, "On Animal Locomotion: on Land, in the Air, and in Water."
STATISTICAL SOCIETY.—7½ P.M. Mr. Geo. H. Darwen, "On Marriages between Cousins in England, and their Effects."
PATHOLOGICAL SOCIETY OF LONDON. — 8½ P.M. The following Specimens will be exhibited:—Skin Disease in an Infant, in association with Disease of Nervous System (living specimen); Myeloid Sarcoma of Head of Humerus; Mixed Tumour of Wrist; Blood-cyst formed in Sarcoma; Tumour of Scapula; Ovarian Cyst with Papillomatous Growths in its interior; Cancer of Ovary; Worm in Right Ventricle of Heart of Dog; Specimens of Tubercle in Pheasants; Cancer in common Fowl; Brain and Cord of Fowl; A Fatty Tumour; Dry Gangrene of Lower Extremities; Prolapsus Linguæ; &c. &c.

Wednesday, March 17.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 3½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND. — 4 P.M. Prof. W. K. Parker, "On the Structure and Development of the Skull."
ROYAL COLLEGE OF PHYSICIANS OF LONDON. — 5 P.M. Dr. Beale, "On Life, and on Vital Action in Health and Disease."

Thursday, March 18.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION.—3 P.M. Prof. Tyndall, "On Electricity."
HARVEIAN SOCIETY OF LONDON.—8 P.M. Dr. Cheadle: "Cases of Duchenne's Paralysis," and a "Case of Morphœa Alba."—Mr. Lennox Browne, "On the Treatment of Simple Catarrh of the Nose, Throat, and Ear."

Friday, March 19.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND. — 4 P.M. Prof. W. K. Parker, "On the Structure and Development of the Skull."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. Beale, "On Life, and on Vital Action in Health and Disease."
ROYAL INSTITUTION. — 8 P.M. Weekly Evening Meeting. — 9 P.M. Dr. R. Liebreich, "On the Real and Ideal in Portraiture."
MEDICAL MICROSCOPICAL SOCIETY. — 8 P.M. Exhibition of Specimens by Mr. G. Giles.

Saturday, March 20.

ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. W. K. Clifford, "On the General Features of the History of Science."

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